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Oliver-Sharpey Lectures

ON THE

PRESENT CONDITION OF OUR KNOWLEDGE REGARDING THE FUNCTIONS OF THE SUPRARENAL CAPSULES.

Delivered before the Royal College of Physicians of London on April 7th and 9th, 1908,

BY E. A. SCHÄFER, LL.D. ABERD., SC.D. DUB., F.R.S.,

PROFESSOR OF PHYSIOLOGY IN THE UNIVERSITY OF EDINBURGH.

LECTURE I.

Delivered on April 7th.

GENTLEMEN,—No more congenial position can well be conceived for a physiologist than to be honoured by an invitation to address upon a physiological subject the College before whom the illustrious Harvey expounded the discovery which has been the starting-point of all physiological research. The congeniality of the position is for me enhanced by the fact that the great English teacher of physiology, Sharpey, in whose memory this lectureship was founded, was my honoured master, and that the founder of the lectures, Dr. George Oliver, was my collaborator in the research which has led me to select the suprarenal capsules as the subject of the present lectures.

WILLIAM SHARPEY.

There must be many of my auditors who remember Sharpey and some who had the privilege of listening to his lectures. But since the death of Michael Foster, which we have so recently had to deplore, there is no one living who had so intimate a personal acquaintance with him as myself. It will not therefore, I trust, seem inappropriate if I preface these lectures with a sketch of the career and character of a man who has exerted, directly or indirectly, a more profound influence upon British physiology than any of our countrymen since the time of Harvey.

It is curious to note that Sharpey was the son of a native of Folkestone, the birthplace of Harvey. Sharpey himself, however, was born in Arbroath, of a Scottish mother (in 1802), and his education was entirely Scottish. His father died before the son saw the light and William Sharpey was brought up by his mother and her second husband, Dr. Arrott, a medical man in Arbroath, who became in all respects a second father to him. At the age of 15 he was sent to the University of Edinburgh as a student of Arts and at 16 he began his medical studies in the same University and in the extramural school which is attached to it. At 19 he obtained the diploma of the College of Surgeons of Edinburgh; and in 1823, at the age of 21, he took the degree of M.D. in the University, the subject of his thesis being cancer of the stomach. Although engaged for a short time in assisting his stepfather at Arbroath, Sharpey soon came to the conclusion that the study of anatomy and physiology would be more congenial to him than medical practice, and both before and after taking his degree he spent some years in the anatomical schools of London, Paris, and Berlin, besides undertaking a prolonged and mainly pedestrian tour in Switzerland and Northern Italy, visiting the great university centres in those countries and making acquaintance with many distinguished anatomists. In Berlin he worked assiduously at anatomy under Rudolphi, making full and minute dissections of all parts of the body and storing up in a retentive memory a mass of facts destined to be drawn upon with great profit in his subsequent teaching. Having finished his *Wanderjahre* Sharpey settled down in Edinburgh in 1829, devoting himself at first entirely to research and subsequently (1831) becoming installed as an extramural lecturer on anatomy in association with his lifelong friend Allen Thomson, who took as his subject physiology. It is interesting to note that while Sharpey subsequently became a famous teacher of physiology, eventually Allen Thomson developed into a no less distinguished teacher of anatomy.

In 1836 Sharpey was invited to fill the chair of anatomy and physiology in the new University of London, which was then about to be transformed into University College; this chair eventually developed into one of physiology alone. Here he at once made a mark as a teacher. His lectures were followed throughout with unabated interest by a long succession of students, for he held the chair during 38 years and his influence in spreading a knowledge of the principles of physiology must have been immense. I believe that there is no actual teacher of physiology now living who sat under him except myself, but when it is remembered that Michael Foster, the founder of the Cambridge School of Biology, was his pupil and friend and that Burdon-Sanderson came early in his career as a physiologist into intimate relations with him it will be apparent how widespread was the influence which Sharpey's teaching has exerted upon the progress of physiology in this country. And not only had he thus a large share in the promotion of physiological science but indirectly the progress of scientific medicine and surgery owes much to his influence, for many who have since become eminent in those subjects were taught by him and the character of their work has manifested the thoroughness of his teaching. It would be invidious to mention names, they will occur to all present. Some are still with us; fortunately, this is the case with the most eminent of all, Lister. The secret of Sharpey's influence is to be found in the personal character of the man, which was reflected in his teaching and gave to it the attributes which all successful teaching must possess—accuracy, clearness, and a due subordination of the several parts of a subject.

Sharpey's quality of accuracy is reflected in his researches. These were neither numerous nor extensive, but most of his observations have stood the test of time and criticism, which is, I fear, more than can be said for the contents of very many scientific memoirs. The best example of this is furnished by his account of the structure and development of bone, which was written for the fifth edition of Quain's "Anatomy," and which, with little modification, still holds good for the eleventh edition of that work. He was a man of singularly sound judgment, kind disposition, and genial nature—qualities which procured for him the esteem of an extensive acquaintance and the affection of those who had the privilege of closer intimacy. He was secretary to the Royal Society during 19 years, and the Catalogue of Scientific Papers, as well as important improvements in the constitution of the society, were largely due to his initiative. He died on April 11th, 1880, at the age of 78 years, and was buried within the abbey churchyard of his native town of Arbroath.

HISTORY OF THE INVESTIGATION OF THE SUPRARENAL CAPSULES.

It is almost exactly 40 years since I, then a young student of medicine, attended for the first time Sharpey's course of lectures on physiology. And this event—a momentous one in my own life, for it unquestionably was the means of determining my future career—brings me directly to the subject which I have chosen for these lectures—namely, the present condition of our knowledge regarding the suprarenal capsules. To understand the position at which our knowledge has arrived on this subject we must have something to compare it with, and for this purpose nothing can be better than a brief statement of the condition of knowledge regarding these bodies at the time of which I am speaking. To illustrate this I have borrowed from the Museum of the Medical School of University College Hospital, by the kind permission of the committee, the stuffed rats which are placed upon the table. The legend regarding these in the catalogue is as follows:—

3415. Two stuffed rats. The white one had the spleen and suprarenal capsules extirpated when it was only a month old and quite small. It increased in size after the operation quite as fast as its fellows which had not been touched. The animal was killed when five months old and no discolouration of the skin or hair could be detected. The lumbar and other lymphatic glands were found enlarged.

The piebald rat had the right adrenal removed and died on the seventh day. The organ was considerably enlarged. On microscopic examination it was found to be the seat of extensive tuberculous disease. At the post mortem it was found that the left suprarenal was quite healthy (4226).—Vide *British and Foreign Medico-Chirurgical Review*, 1858, vol. xxi., p. 204, Harley on the Suprarenal Capsules.

We need not trouble further about the piebald animal, but the albino may fairly be said to typify the then condition of knowledge—which was negative—regarding the organs we are dealing with. To understand how these experiments came to be conducted it is necessary to go back some 13 years further—53 years from now. In the year 1855 Addison, a Fellow of this College and physician to Guy's Hospital, described the disease which bears his name. He showed

that in man a certain group of symptoms occurs occasionally—fortunately, we may add, rarely—"anæmia, general languor or debility, remarkable feebleness of the heart's action, irritability of the stomach, and a peculiar change of colour in the skin," the disease being usually fatal. Pigmentation of the skin and of certain mucous membranes is the sign which is, perhaps, most characteristic of the disease and in many cases first attracts attention. It is, says Addison, "the great distinctive mark of this form of anæmia." Another of its most pronounced features is the profound asthenia, "which is out of all proportion to the general condition" (Osler). The symptoms were shown by Addison to be associated with destructive disease—usually tuberculous—of the suprarenal capsules.

Addison's monograph attracted immediate attention and soon led to experiments upon these bodies. The earliest were by Brown-Séquard (1856) who removed the capsules in various animals (dogs, cats, rabbits, and guinea pigs), with an unfailingly fatal result—usually within 12 hours in adult animals, young animals surviving the operation somewhat longer. Removal of one capsule produced in some cases death within a few days, but in other cases had no obvious effect; when the second was removed, even after a long interval of time, the symptoms of total ablation rapidly showed themselves, although death followed less rapidly than after simultaneous removal of both capsules. The symptoms following the removal were those of Addison's disease, but more acute and without the pigmentation. Brown-Séquard supposed, and doubtless correctly, that the absence of pigmentation in these experiments is due to the rapidity with which a fatal result supervenes, for the formation of pigment must be a somewhat slow chemical process. More recent observers—Tizzoni, Nothnagel—who have succeeded in slowly destroying the suprarenals of animals by other means, such as crushing, state that they have been able to observe such pigmentation in the animals experimented on. Brown-Séquard's results were repeated by other observers; amongst these may be mentioned Phillipeaux, George Harley, and Schiff. Besides employing ordinary domestic animals, such as the cat and the dog, in which, as Brown-Séquard had done, they invariably obtained fatal results, these observers also selected for experiment the ordinary tame white rat, and one of these, operated upon by Harley, is now before you. It was by a curious chance that this animal was not employed by Brown-Séquard, because the rat happens to be the one common animal which is able to withstand complete removal of both suprarenal capsules. The reason for this was not at the time apparent, although it is now known, for the rat is exceptional in possessing in various parts at the back of the abdomen and pelvis numerous small glandular structures which are composed of cells having the characteristic features and functions of the cells of the suprarenal medulla. Harley as well as Phillipeaux and others accordingly found that a rat may indefinitely survive entire removal of the suprarenals, and although they had got contrary results with other animals they put the fatal results down to injury to adjacent nerves and blood-vessels, and, generalising from the negative effect of removal in the rat, they came to the conclusion that these organs are not, as Brown Séquard supposed, essential to life. They regarded the contrary results of Brown-Séquard as being also due to collateral injuries to adjacent nervous and other structures and not to the absence of the suprarenal capsules. They were fortified in this opinion by the fact that in many of their cases death supervened after removal of one capsule only—a result by no means surprising when we remember the situation of the capsules, the fact that they were usually attacked from the peritoneal cavity, and that this was before the days of asepsis. We now know that Harley and the others were, in the conclusion they drew, wrong and Brown Séquard right; but we can recognise that it was a natural conclusion to draw, and are not surprised that it was shared generally by physiologists, and amongst them by Sharpey, who must have witnessed the experiments and not improbably had been consulted by Harley about them. Such negative results—their real cause being at that time not understood—had the effect for the nonce of so effectually obscuring the inferences to be drawn from ablation experiments upon this organ that it was not until a lapse of 30 years that experimentation upon the subject was recommenced. It is, therefore, a simple statement of fact that positive knowledge regarding the functions of the suprarenal capsules, as reflected by the teaching of the most prominent physiologists of the time, was 40 years ago *nil*; while the information regarding these structures which has since accumulated is in all respects—as regards development, structure, and functions—so large that it would occupy the greater part of the time devoted to one of these lectures merely to enumerate the papers which have been published upon them and upon important collateral questions which have been raised in the course of the investigations made to elucidate their functions.

The ball which was set rolling by Addison and Brown-Séquard in the middle of the last century was, after a prolonged period of rest, again started by Tizzoni (1884), and has been now kept going uninterruptedly for 24 years. Tizzoni himself, although obtaining a fatal result from complete removal, also in some cases got a like result from removal of one capsule, and was inclined to come to the same conclusion as that arrived at by the earlier experimenters—namely, that when death occurred it was due to an effect upon the nervous system, and that these organs are not essential to life. But before long Brown-Séquard's results were confirmed by many observers, among whom may especially be mentioned Dominicis (1894) and Langlois, who, partly in conjunction with Abelous (1891-92), partly in investigations carried out independently and with others (1893-97), performed a large number of partial and complete extirpations—always, in the case of the complete removal, with the same fatal result. Dr. George Oliver and I, in the course of the experiments to which I shall afterwards have to refer, and as accessory to them, also obtained similar results to those described by Brown-Séquard. The animals we employed were monkeys, dogs, cats, rabbits, and guinea-pigs. But the most extensive observations of this nature seem to be those of Strehl and Weiss (1901), who extirpated the suprarenals in as many as 114 animals, all of which died in times varying from four hours to five days with the symptoms characteristic of this deprivation. It may therefore be admitted that the conclusion which Brown-Séquard arrived at in 1856—namely, that these organs are essential to life—has been abundantly justified, although their mode of action was not understood by him in the sense in which it is now for the most part conceded. Although he speaks of them as secreting glands, Brown Séquard appears to have been of opinion that the cause of death on their removal is the accumulation of toxic substances in the blood. He considered that one of their functions consists in modifying a substance which is endowed with the property of being easily transformed into pigment, and that they prevent this transformation. In a later communication he ascribed the immunity of the white rat to its albinism—that is, its inability to produce pigment.

It is curious to notice that in resuming the consideration of the subject 30 years later Brown-Séquard considered that he was in error in regarding these organs as essential to life and in attributing death after their removal to suppression of their functions. He now (1887) believed that the fatal result was due to irritation of nerves as the result of the operation, an opinion which had been pretty general amongst those who immediately followed him, and who had failed—in the rat—to confirm his observations regarding the effects of complete removal in other animals. Brown-Séquard did not conceive the idea that the fatality following complete extirpation might be due to suppression of an internal secretion, useful and even necessary in the economy, but regarded the main function of these organs as being for the prevention of the formation of a toxic body, and therefore as *an itoxic*—an opinion which seems to have had a marked influence upon the conclusions arrived at by physiologists, especially those of the French school, when interest in the subject became revived. And this, doubtless, led to the crystallisation of the idea that there is present in the blood of animals deprived of suprarenals a definite toxin producing muscular paralysis, in the opinion of Langlois similar in action to curare (theory of auto-intoxication). But with the demonstration of the fact that the glands yield a substance which produces beneficial physiological effects, such as increased tone and contraction of the heart and muscles, blood-vessels, and of the muscular system in general, the actual cause of the muscular weakness and lack of tonicity which result from their extirpation became manifest and led to the establishment of the theory of internal secretion. But before this phase was arrived at the subject had been approached by another mode of experimentation, that of the determination of the physiological action of hypodermic injections of extracts of the capsular substance. The first to adopt this

method of research was Pellacani (1879) associated later with Foà (1883). These observers were engaged in investigating the effects of organ extracts in determining the formation of coagula, and amongst other substances they injected a water extract of six suprarenal capsules of the ox into the auricular vein of a rabbit. The injection produced death by arrest of respiration within two minutes, preceded by rapid respirations, general convulsions, strong intestinal peristalsis, and dilatation of the pupil. Subcutaneous injections in other animals produced death within 24 hours. They believed death to be due to the formation of coagula *intra vitam*. It will be seen that the doses they dealt with were enormous. They made no observations upon the blood pressure. Pellacani and Foà's results were confirmed by various other Italian investigators—Marino, Zucco, Dutti, Guarneri—who concluded that the toxic material obtained from the capsules owed its activity to the presence of *neurin*. Dr. Oliver and I, however, later were able to show that neurin has entirely different physiological effects. Other observers (Tizzoni, 1884, Alexais and Arnaud, 1890–91) denied the pre-existence of a toxic substance and regarded the toxic effects sometimes produced as due to some chemical change occurring in the capsules after removal from the body, or during the manipulations employed for the extraction of the supposed toxic substance. But the different results obtained by these observers seem rather to have been due to the varieties of animals chosen and to the relative dosage of the extract. As Dr. Oliver and I subsequently found, the rabbit is more susceptible to subcutaneous injection of the extract than other laboratory animals, the lethal dose for some species being much greater. Lesage (1904), indeed, states that the lethal dose of adrenalin injected intravenously is 0·1 to 0·2 milligramme per kilogramme for the dog, rabbit, and guinea-pig, and 0 5 to 0 8 milligramme for the cat; but Taramasio (1902) found the lethal dose injected subcutaneously to be 0 02 gramme per kilogramme for the guinea-pig and 0·01 gramme for the rabbit. Further, it is found that in some animals with repeated doses a certain degree of immunity may be established. Swale Vincent (1898) obtained results leading to the same conclusion; he also showed that the toxic effects, like the physiological effects, are due to a substance contained in the medulla alone.

The final stage of our knowledge regarding the functions of these organs was entered when the effects of intravenous injections were investigated with the aid of the apparatus (manometer, oncometer, cardiometer) ordinarily in use in physiological laboratories. This was first attempted by Dr. Oliver and myself, and the results were exhibited to the Physiological Society and published in its Proceedings. Investigations carried on by these methods showed that the gland extracts exert a potent influence upon the heart and blood-vessels, and to a less degree upon skeletal muscles. Combined with the effects of subcutaneous injections, and with the fatal effects of extirpation of both capsules in a number of animals of different kinds, there was no room left for doubt that a substance is produced within the gland which is not only beneficial in maintaining the tone of muscular tissues, and particularly that of the vascular system, but which is, at least in most kinds of animals, essential to life, although in excessive doses it exhibits toxic properties. We felt justified in regarding this in the light of a true internal secretion, and in looking upon its absence in animals deprived of their suprarenal capsules, and in cases in the human subject in which both capsules were involved in disease, as the true cause of the symptoms which manifest themselves in these circumstances, not, as was then generally believed, the result of the action of a toxin accumulating in the blood, which it was the normal function of the suprarenals to destroy. The position of the question in 1895 is thus summed up by Dr. H. D. Rolleston in his Goulstonian lectures. After first stating that three deductions are possible from the various researches which had up to that date been published regarding the physiology of the suprarenal bodies: (1) That they have no proper function, and are important only from their close relation to the sympathetic; (2) that they are excreting glands, removing pigments and toxins from the circulation; and (3) that they are secretory glands, providing an internal secretion, which is of use in the economy, he continues: "the evidence is sufficiently strong to warrant the conclusion that the adrenal bodies are functional glands," and that "Addison's disease is due to an inadequate supply of suprarenal secretion."

STRUCTURE AND DEVELOPMENT OF SUPRARENAL CAPSULES.

Before entering into details regarding the physiological effects of this internal secretion of the suprarenals it may be of interest to give a brief account of certain special features which are exhibited in the structure and development of these organs. The general structure of the suprarenals in man and mammals is well known. Each is composed of a broad, striated (in section), yellowish cortex, and a deep-red medulla, the colour of the latter being due to blood in its sinus-like vessels. Between cortex and medulla is a boundary layer, usually reckoned with the cortex under the name of zona reticularis, and developed along with it, but differing both from it and from the medulla in arrangement of blood-vessels, and to some extent in the appearance of its cells. The cells of the cortex are epithelium-like, are arranged in solid columns with blood-vessels running in connective tissue between them, but not penetrating into the columns, and contain a fatty or lipoid substance which imparts to the cortex its yellow tint. The course of the blood stream is from the surface towards the medulla. The cortical columns near the surface may exhibit a semitubular arrangement; their cells in some animals are long and cylindrical. In the boundary layer (zona reticularis) of the cortex the cell columns have a more open arrangement; they are separated by vascular spaces, and in some animals are characterised by the presence in the cells of a special brown pigment. The cells of the medulla are also epithelium-like; they are set vertically around the vascular spaces, which appear to be not true capillaries but to have a sinusoid character, like those of the liver. The blood is collected from these spaces by veins most of which join to form the capsular vein which emerges from a groove in the anterior surface of the gland. The blood which flows from the gland contains distinctly more oxygen and less carbon dioxide than ordinary venous blood (Langlois and Chassevant, 1893). It also contains a larger amount of the active principle of the organ than ordinary blood; there is therefore no doubt that this material leaves the organ by the blood-vessels. This is corroborated by histological evidence. The cells of the medulla stain intensely brown with chromic acid or its salts (Henle); they and similar staining cells found in other parts (sympathetic ganglia, coccygeal gland) have therefore been termed chromophil cells (Stilling, 1890) or chromaffin cells (Kohn, 1898). Granules or globules of a material yielding this reaction have been described not only within the cells of the medulla (Stilling, 1887) but also in the blood within the medullary sinuses (Gottlieb, 1883; Pfaundler, 1892; Manasse, 1895; Carlier, 1893; Auld, 1894) and in that of the suprarenal vein. There is, therefore, strong histological evidence that the cells of the medulla pass a secreted substance into the blood. Many observers have described sympathetic ganglion cells within the medulla, but their existence has been denied by others. There is apparently considerable variation in this respect in different species of animals; they may be absent or present and may be scattered or grouped into small ganglia. In any case they lie in the course of nerves which the gland receives from the sympathetic. Biedl (1897) states that stimulation of the splanchnics causes both an increased flow of blood through the gland (due to excitation of vaso-dilators) and an increased formation of the active material of the medulla (due to excitation of secretory fibres); the secretion and blood-flow are therefore, as with ordinary secreting glands, governed from the central nervous system.

The comparative anatomy of the suprarenals has been investigated most satisfactorily by Swale Vincent (1898), who has described the structure and relations of these organs in various fishes, in tailed and tailless amphibia, in reptiles, birds, and several mammals. The most important of these observations from the point of view of their physiology is that in elasmobranch fishes the cortex and medulla are represented by two entirely distinct sets of glandular organs. The cortex of higher vertebrata is represented by the so called *interrenal body*—"an ochre yellow, rod-shaped body, paired in the rays, unpaired in the sharks, lying usually in the region of the posterior part of the kidney," and having the appearance microscopically of a secreting gland, but without ducts. The medulla, on the other hand, is represented by paired bodies, segmentally arranged, extending on each side of the vertebral column from the sinus of Monro to the posterior end of the kidney. The paired bodies are closely related to the sympathetic ganglia, have a superficial layer of non-chromophil cells and a central mass of

chromophil cells, and also possess cells which appear to be transitional to sympathetic nerve cells. F. Balfour (1878) first put forward the view that these paired organs represent the medulla of the mammalian capsules and the interrenal body the cortex; Vincent found by experiment that the paired bodies yield an extract which produces the same physiological effects as suprarenal medulla. In other fishes no organs representing the medulla have hitherto been found. The suprarenals are represented in teleostei by paired, roundish pink bodies (corpuscles of Stannius) attached to the kidney near its posterior extremity. Microscopically they resemble suprarenal cortex in structure, and their extracts have no physiological activity (Moore and Vincent, 1898). Swale Vincent removed these bodies in the eel and three specimens survived the removal 28, 64, and 119 days respectively, whereas the longest time that a frog will survive complete extirpation of its adrenals is 12 or 13 days (Abelous and Langlois). In ganoids similar bodies lie imbedded in the substance of the kidney. In amphibia both cortex and medulla are represented as occurring in small yellow masses or streaks adherent to the kidney, each mass containing always both cortex and medulla, the latter lying next to the kidney substance and possessing chromophil cells. These yield a physiologically active extract. The medulla in urodela is intimately related to the sympathetic ganglia and there are transitions between the sympathetic cells and those of the medulla (Leydig, 1853; Vincent, 1898). In reptiles and birds the suprarenals are in close anatomical relation, not with the kidneys, but with the reproductive glands. The cortical part is formed of columns; medullary chromophil cells are distributed throughout it in isolated masses of various sizes and shapes, but most of the medulla forms a layer along the dorsal surface of the organ.

In birds the cortex and medulla are more intimately mixed than in any other animals, and the medulla is more abundant in proportion. As Vincent remarks, it is interesting to note in this relation that birds have a very high blood pressure. There are also intermediate cells between those of the sympathetic ganglia and those of the medulla. It may here be remarked that the terms *cortex* and *medulla*, although here used to denote the two specific parts of the suprarenals, are in their relationship to one another only applicable to mammals, in which alone the medulla is inclosed by cortex. In one invertebrate only, up to the present, has any evidence been forthcoming of the existence of structures corresponding, at least physiologically, to the capsules of vertebrata. Roaf and Nierenstein (1907) have obtained from the hypobranchial gland of a mollusc (*Purpura lapillus*) an extract which both chemically and physiologically resembles in its action the active substance of the vertebrate suprarenal medulla. But the identity of the substance with adrenalin is denied by Dubois (1907) who seems to have previously subjected this gland to investigation. Vincent was able to obtain no such reactions as are given by suprarenal medulla from certain cells within the nervous system of *Palidina vivipara*, which Leydig had conjectured might represent suprarenal tissue.

Development.—Balfour and Mitsukuri (1881) described a separate origin for cortex and medulla, the former being developed from mesoderm, the latter from the same blastema as the sympathetic ganglia. This view is now universally conceded. Actually the cortex is derived from the mesodermic epithelium which covers the mesial aspect of the forepart of the Wolffian body, in front of the germinal epithelium, appearing first as a series of buds which grow together. The cells become arranged in columns and the three series are early visible. In an embryo of 15·5 milligrammes it is depicted by Bryce (Quain's Anatomy, eleventh edition, 1908) as a rounded mass (on section) with sinus-like vessels in its central part and extending towards its attachment; they open into a central venule, as in a liver lobule. Between this organ and the aorta are masses of embryonic sympathetic cells and groups of these grow into the gland. These have, like the sympathetic generally, been derived from neural ectoderm but they are not yet differentiated into definite nerve cells. Those which grow into the gland do not for the most part undergo this differentiation at all but are transformed into the cells of the medulla, which becomes marked off from the cortex in the fourth month. Ultimately they acquire chromophil substance; it is stated that this is not actually found in them in man until some little time after birth (Svehla, 1900; Moore and Purinton, 1900). But it occurs in the embryos of ox and sheep long before birth. It is well known that the suprarenals are relatively large throughout fœtal life; this must have some functional significance but what it is is unknown. It probably concerns the cortical substance. Some cells of the sympathetic ganglia which differentiate into chromophil cells may remain as such within the ganglia and occasionally small independent masses occur in the neighbourhood of the suprarenal or elsewhere at the back of the abdomen. As has already been stated, these are constantly present in the rat and doubtless account for the fact that this animal can more readily than any other survive the extirpation of both capsules. Hence the results of Harley and others, as typified by the stuffed animals in the case before you.

WHAT IS THE USE OF THE SUPRARENAL GLANDS?

In 1716 the Academy of Sciences of Bordeaux proposed as the subject of a prize, "What is the Use of the Suprarenal Glands?" The competing essays were submitted to Montesquieu, the celebrated author of "Lettres Persanes" (a satirical description of French society and politics); "Causes de la Grandeur des Romaines et de leur Décadence; De l'Esprit des Lois" (which, although published anonymously and put on the "Index Purgatorius," passed through 22 editions in less than two years); "Défense de l'Esprit des Lois; Lysimaque," a dialogue on despotism; and a novel termed "Arsace and Isménie." Montesquieu had not yet attained to literary fame, but was a young man of 27. Nevertheless, he had been made Counsellor of the *Parlement* of Bordeaux two years previously and was at this time its President. It is recorded of him that although he discharged the duties of his office faithfully he by preference devoted himself to researches on the physical characters of bodies, on sound and the causation of echoes, and on physiological problems such as the use of the renal (? suprarenal) glands. It is therefore probable that the subject of the essay had been suggested by him.

Montesquieu's report is curiously satirical. He commences with an account of the views which up to that time had been entertained regarding the function of these bodies (I quote from Langlois):—

> Some have imagined that they (the capsules) are placed in the situation where they occur in order to hold up the stomach which would otherwise press too hard upon the renal arteries; others to strengthen and consolidate the venous plexus which is in contact with them; conclusions which, says Montesquieu, appear to have escaped the ancients, who were content with simply expressing ignorance of the functions of these glands.
>
> Gaspard Bartholin was the first to relieve them from the stigma of performing so menial an office and to render them more worthy of the attention of savants. He is of opinion that a humour which he terms "black bile" (atrabilious humour) is preserved within their cavity, and believes that there exists a communication between the capsules and the kidneys, the atrabilious humour serving to dilute the urine.
>
> Some anatomists, such as Spigelius, teach that the only use of the capsules is to collect the humidities which leak out of the great vessels which surround them; while others have held that a bilious juice is formed within them, and being carried to the heart, mingles with acidity which is there present and excites fermentation, this being the cause of the heart's movements; others, again, consider that the humour within the capsules is nothing more than the lacteal juice which is distributed by the mesenteric glands.

Montesquieu then proceeds with the analysis of the memoirs which were presented to the learned Academy of Sciences.

> We have one author who affirms the existence of two kinds of bile: one grosser, secreted by the liver, the other more subtile secreted by the kidneys with the aid of a ferment. This ferment flows from the capsules through ducts, the existence of which is completely unknown to us, and as to which, adds Montesquieu, we are threatened with perpetual ignorance.
>
> Another describes to us two small canals which serve to carry the liquids which are found in the cavity of the capsule into the vein which belongs to it; this humour, which many experiments lead us to believe is of an alkaline nature, plays, according to our author, the part of restoring fluidity to the blood which is returning from the kidney and which has parted with its serosity in the formation of the urine.
>
> Another competitor who begins by giving "*assez heureusement*" a description of the difference between conglobate and conglomerate glands puts the suprarenal glands into the category of conglobates. He believes that they are nothing but a continuity of blood-vessels within which, as within so many filters, the blood becomes more subtile. ..... The reason why there are no ducts to these glands, nor in any conglobate glands, is that there is no question of their separating liquids from the blood but only of effecting the process of subtilisation.

Finally, after declaring that no single memoir amongst those submitted to his judgment can be looked upon as capable of satisfying the legitimate curiosity of the academy, Montesquieu concludes—

> Perhaps chance may some day effect what all these careful labours have been unable to perform.

And after a lapse of 177 years chance effected this result and

enabled some sort of reasonable reply to be given to the question which was enunciated in 1716 by the Académie of Bordeaux, "What is the use of the suprarenal glands?"

In the autumn of 1893 there called upon me in my laboratory in University College a gentleman who was personally unknown to me but with whom I had a common bond of interest—seeing that we had both been pupils of Sharpey, whose chair I at that time had the honour to occupy. I found that my visitor was Dr. George Oliver, already distinguished not only as a specialist in his particular branch of medical practice but also for his clinical applications of physiological methods. Dr. Oliver was desirous of discussing with me the results which he had been obtaining from the exhibition by the mouth of extracts from certain animal tissues and the effects which these had in his hands produced upon the blood-vessels of man, as investigated by two instruments which he had devised—one of them, the hæmadynamometer, intended to read variations in blood pressure, and the other, the arteriometer, for measuring with exactness the lumen of the radial or any superficial artery. Dr. Oliver had ascertained, or believed he had ascertained, by the use of these instruments, that glycerine extracts of some organs produce diminution in calibre of the arteries and increase of pulse tension, of others the reverse effect. Although these conclusions were interesting it was easy to see that results which were obtained under mechanical conditions which were somewhat complex and not easy of interpretation, could not be expected to decide an important physiological question of this nature, and that it was essential, in order to obtain exact knowledge of the action, if any, of such extracts, to conduct the investigations with the employment of all the means at the disposal of the modern physiologist. With the suggestion that we should undertake such an investigation Dr. Oliver promptly agreed, and it was then and there arranged to devote that winter to a thorough examination of the physiological effects of such extracts.

The result of this conjunction of effort, brought about by the fortunate chance foreseen by old Montesquieu, speedily showed that, whilst many of the extracts which had been dealt with clinically by Oliver were inert or at any rate not specific in their action, the suprarenal capsules, and to a less extent the pituitary body, yield to glycerine and to water and saline solutions, principles which have an extraordinary effect upon the tone of the heart and arteries, transcending that of any known drug. We therefore decided to confine our attention during the time at our disposal in that winter to investigating the details of this action, and in the following March we were in a position to bring our results, which were already fairly complete, to the notice of the Physiological Society. In the meantime Mr. B. Moore, who is now professor of bio-chemistry in the University of Liverpool, set to work to endeavour to isolate the active principle of the extract and to determine its chemical relationships. Although neither Moore nor other chemists who in various countries busied themselves with the solution of the same problem did not at the time succeed in obtaining the active principle in a completely isolated condition, sufficient evidence was forthcoming to prove that it is a substance of relatively simple constitution. We had, in fact, already determined that it may be boiled for a short time without deterioration (although a temperature of 140° C. is said to destroy the blood pressure raising principle, and according to Gürber to reverse the action of the extract); that it is dialysable and insoluble in absolute alcohol, and is not destroyed by acids or by the gastric juice. Moore found it to be identical with a powerfully reducing substance, first described by Vulpian (1857), in the medulla of the organ, and giving a characteristic colour reaction with oxidising agents. Abel of the Johns Hopkins University and other physiological chemists who continued these investigations before long succeeded in obtaining crystallisable compounds of the active substance and in determining a definite formula for it; Abel suggested for the substance the name epinephrin. Somewhat later (January, 1901) Takamine, a Japanese chemist, settled in New York, and independently Aldrich (August, 1901) worked out a method for the complete isolation of the active principle in a crystalline form (rhombic plates or needles), and Takamine gave to this product the name adrenalin. Other designations for the same substance are sphygmogenin (Fraenkel), suprarenin (v. Furth), and hemisine, although the one which is most commonly employed, and by which it is best known, is adrenalin. It is, however, for various reasons advisable to adopt a name which has no commercial attachments, which "adrenalin" seems to have acquired; and since it is hardly possible to use a term which will signify the precise chemical constitution of the active substance, this constitution being somewhat complicated,[1] it would, I think, be well to substitute the term "adrenin" for the proprietary name "adrenalin."

An adrenin or adrenalin which has been produced synthetically in the laboratory by Stoltz (1907)—other substances nearly allied in constitution and action, but not identical, having been previously obtained by synthetic processes by Friedmann, Stoltz himself, and Dakin—is said by Hofmann (1907) to show all the activity of the natural substance. But Professor Cushny, who has tested it physiologically, informs me that the activity of the artificial adrenalin is very inferior to that of the natural product. Nothing is certainly known as to the substances from which adrenin is formed in the organism, but W. L. Halle suggests (1906) that one of these may be tyrosine, which undergoes transformation into adrenin under the influence of a ferment in the suprarenal. In support of this conclusion, he found that when two portions of emulsion of fresh ox or pig suprarenal were taken, to one of them tyrosine being added, both being kept, with addition of toluol to prevent putrefaction, for six days in an incubator, the sample containing the tyrosine was found to have from 14 to 33 per cent. more adrenin than the control.

The Hunterian Lectures

ON

THE CONNECTIVE TISSUE IN CARCINOMA AND IN CERTAIN INFLAMMATORY STATES THAT PRECEDE ITS ONSET.

Delivered before the Royal College of Surgeons of England on Feb. 17th, 19th, and 21st, 1908,

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LECTURE III.[2]

Delivered on Feb. 21st.

CARCINOMA OF THE BREAST.

MR. PRESIDENT AND GENTLEMEN,—In the case of carcinoma affecting the breast the existence of an antecedent inflammatory state is not clinically so obvious as in the case of carcinoma affecting the vulva, the tongue, the cervix, and the skin. From the pathological standpoint, also, evidence of prior change in the breast tissue is much more difficult to prove. The cause of this is that histologically the breast is an extremely variable organ and that therefore it is very difficult to set a standard of normality with which to compare its pathological changes. I would, therefore, venture to detail some points in connexion with its normal histology. (Fig. 20.)

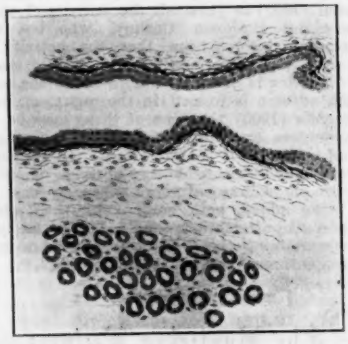
The ultimate acini of the breast are rounded in form and are lined with a single layer of broadly columnar or polyhedral epithelium. These acini occur in groups imbedded in the mammary matrix. This matrix is a peculiar tissue made up of a very fine framework of fibroglia fibres, on and around which appears to be deposited a soft homogeneous collagenous-looking substance which on heating can be shown to contain a considerable proportion of fat. There are comparatively few cells to be seen in this matrix except in the immediate vicinity of the acini and ducts. These cells are of two varieties: (1) hyaline connective tissue cells with a reticular-looking nucleus and (2) mast cells. The

[1] The empirical formula which is given for adrenalin is $C_9H_{13}NO_3$. The constitution of the artificial product obtained by Stoltz is dioxyphenyl-aethanol-methylamin.

[2] Lectures I. and II. were published in THE LANCET of May 16th (p. 1389) and 23rd (p. 1465), 1908, respectively.

hyaline cells are particularly aggregated around the groups of acini and form a loose cellular sheath to the ducts. The mast cells are single and are scattered irregularly through the matrix. The ducts themselves are lined by one or two layers of short columnar epithelium. The distribution of the elastic tissue in the breast is of much importance. Each duct is invested by a definite elastic layer situated almost immediately under the epithelium and intervening between it and the layer of hyaline

FIG. 20.



Portion of a lactating breast, showing a part of a duct and a group of acini. The distribution of the elastic fibres immediately under the epithelium of the duct is well shown.

connective tissue cells. This elastic tunic is prolonged to the finest ducts but ceases where they pass into the acini. In the larger blood-vessels an elastica is present as usual, but in the matrix elsewhere there is a striking absence of this tissue, particularly in the young breast.

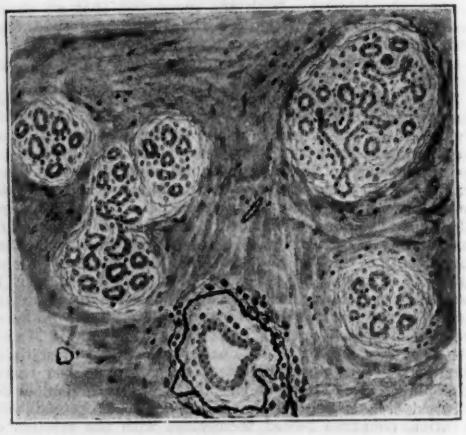
The above general type presents many varieties. Thus in the lactating breast the number of acini is very large, their epithelium is swollen, and the number of connective tissue cells surrounding them is increased. The ducts partake of the same hypertrophy. In the poorly-developed or young virgin breast the parenchyma is scanty. The acini are small and their circular form and lumen are not well developed. The larger ducts are formed but many of the smaller ones are represented by mere rows of compressed cells without a definite lumen. In well developed but non-lactating mammæ an intermediate condition is seen. The only constant age-change appears to be a tendency for the amount of elastic tissue to increase with advancing years, whilst the matrix becomes less homogeneous in appearance.

The changes of chronic mastitis.—In the early stages of chronic mastitis there is marked evidence of increased cellularity. The number of acini is much augmented, whilst individually they show a hypertrophic condition of the epithelial lining. The mammary matrix surrounding the groups of acini exhibits an unusual number of hyaline tissue cells, amongst which are found scattered lymphocytes and plasma cells. The ducts are enlarged and their epithelium hypertrophic, so that irregular projections may be formed protruding into the lumen. The mammary matrix in proximity to the ducts shows marked cell proliferation, both lymphocytes and plasma cells being present. I have closely examined tissue from a number of breasts of different ages and find that plasma cells do not normally occur in that organ. Coincidently with this cell proliferation changes in the distribution of the elastic tissue are seen, and whereas in the normal organ the epithelium practically rests on the elastica a hyaline layer of tissue now intervenes between the epithelium and the elastic fibres. In more advanced cases the elastic tissue of the smaller ducts becomes irregular and finally disappears, whilst the groups of acini become surrounded by island-like areas of wavy fibrous tissue quite different in appearance from the mammary matrix beyond them. (Fig. 21.)

Carcinoma of the breast.—An examination of a large number of specimens shows that the growth of carcinoma of the breast is at first pleuricentric—that is to say, there occurs a progressive conversion of non-malignant epithelium into carcinoma cells. In early specimens gradations of form between the tubules and acini outside the growth and the alveoli of the growth itself have been found by Leitch, and will be published in the forthcoming report of the Middlesex Hospital Cancer Investigation Department, and my work confirms his. In more advanced cases such changes are not apparent because practically all the breast tissue proper is destroyed.

The tissue cell proliferation in carcinoma of the breast presents characteristics identical with those of carcinoma in other sites. It is most marked at and beyond the periphery of the growth. Lymphocytes and plasma cells are the chief cell forms, but they are not present as a rule in the dense aggregations seen in squamous cell carcinoma, nor is the existence of definite zones characterised by different cell types so obvious. That this is so is however, to be expected, when one considers that instead of the malignant growth taking place from a plane surface it does so from one already extensively convoluted. Thus are accounted for those appearances of ducts or alveoli undergoing early malignant change lying amongst well-formed carcinomatous alveoli which have evidently taken some time to produce. As a result of this plasma cell and lymphocytal proliferation the mammary matrix becomes rarefied and the homogeneous ground substance disappears, but in the older part of the stroma the number of cells is progressively reduced, and in the oldest parts only the hyaline tissue cell remains together with many fibroglia fibres, on and around which a new collagenous ground substance is apparently deposited. Beyond the periphery of the growth new lymph nodes are frequently encountered with well-marked germinal areas.

FIG. 21.



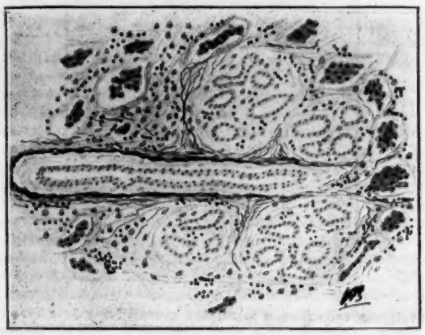
Chronic mastitis, showing the altered relations of the elastica to the epithelium of the duct and the new fibrous tissue surrounding the groups of acini.

Elastic tissue is for the most part absent from the stroma. One must, however, remember that the normal breast matrix contains very few of these fibres. Their disappearance in chief part undoubtedly accompanies the connective tissue cell proliferation. For the rest, certain of them which escape the results of the proliferation and become isolated in the stroma appear to undergo a simple atrophy. In certain cases, however, isolated areas are scattered through the stroma containing a very large amount of a granular-looking elastin. Part of this may be due to condensation of pre-existing fibres, but some of it is undoubtedly newly formed. This formation and condensation invariably occurs around one of the larger ducts which has as yet escaped destruction by the growth. Hence it would appear that the stroma of a mammary carcinoma is essentially that of the breast itself with the addition and subtraction of certain elements as a result of the carcinomatous process.

The relation between mastitis and carcinoma of the breast.—From the clinical standpoint a certain number of cases of carcinoma of the breast appear to have been definitely preceded by mastitis but in the majority neither sign nor history of such condition is obtainable. The evidence of pre-existent inflammatory change is much stronger, however, from the histological standpoint. In the course of my

investigation I have succeeded in finding traces of mastitis in all early cases. The ducts outside the carcinomatous area exhibit the same layer of hyaline tissue between the epithelium and the elastica that occurs in chronic mastitis, and surrounding them are found lymphocytes and plasma cells. The groups of acini inside the carcinoma in some of my specimens are typical of mastitis but in others show no definite change. (Fig. 22.) It is, however, to be remembered

FIG. 22.



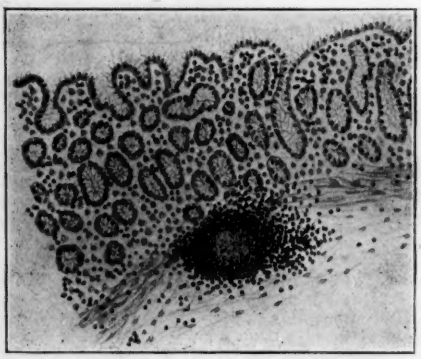
Groups of mammary acini and a duct showing the changes of chronic mastitis and surrounded by carcinoma.

that the changes due to mastitis are commonly localised in small areas, and where the breast tissue has been extensively destroyed by the growth evidence of these changes may be absent from that which remains; for carcinoma starting in a localised area of mastitis would soon obliterate all traces of the pre-existent inflammation. This is at least a possible explanation of cases of carcinoma from which evidence of old mastitis is histologically absent.

CARCINOMA OF THE INTESTINE.

In the tissue around a carcinoma of the rectum (histologically a typical columnar cell carcinoma), which formed an ulcer in the posterior wall of the gut less than a centimetre square in extent, the following appearances were found. (Fig. 23.) At the edge of the growth are seen

FIG. 23.



Tissue beyond the edge of a carcinoma of the rectum, showing hypertrophied glands, plasma cell proliferation, and loss of elastic tissue, together with an abnormal lymph node.

those appearances described by Ribbert—viz., a great elongation of the gland tubules, balanced by an equal upgrowth of interglandular connective tissue. The tips of the gland tubules bear a normal relation to the muscularis mucosæ, suggesting that the primary change was an overgrowth of the connective tissue to which the glandular elongation was secondary. The transition from this area to that of actual malignancy is abrupt. The stroma of the growth is scanty and fibrous; at its periphery particularly are seen many lymphocytes and plasma cells. Beyond the growth in *either direction* the interglandular connective tissue of the mucosa is crowded by plasma cells and an abnormal number of lymphocytes. This plasma cell proliferation extends for a distance beyond the growth greater than the diameter of the ulcer itself. All the solitary follicles show hypertrophy and large germinal areas with many mitotic figures and newly formed lymph nodes are also seen. Few polynuclear leucocytes are present.

When stained by Weigert's method it is seen that the plexus of elastic fibres, which normally forms a well-marked stratum in the connective tissue beneath the gland tubules, is entirely absent in the area of the plasma cell proliferation. It is absent also in the more superficial portions of the stroma, but a good many fibres remain in its deeper part. This disappearance of elastic tissue, together with a dense plasma cell infiltration of the subepithelial tissue far beyond the area of the growth, is very significant. Had it occurred on the proximal side only it might have been suggested that it was due to a stercoral proctitis such as commonly occurs above a carcinomatous stricture of the rectum. Apart from the fact that the growth was too small to cause any stricture this idea is negatived by its presence on the distal side of the ulcer and by the absence of polynuclear leucocytes. The appearances suggest strongly that the growth itself began on a surface already the seat of marked inflammatory changes. Two other early cases that I have examined lead me to the same conclusion—namely, that carcinoma of the rectum starts in an area of chronic proctitis. Advanced growths are useless for the investigation of this point, firstly because the extensive spread of the carcinoma destroys the entire pre-carcinomatous area, and secondly because of the secondary inflammatory changes that are soon superimposed on it.

CARCINOMA OF THE ŒSOPHAGUS.

In a carcinoma of the œsophagus of small extent the following features were recognised. The tumour is evidently due to the downgrowth at many points of the surface epithelium. Surrounding the down growing epithelial processes are large masses of lymphocytes and plasma cells arranged in the manner which has been described. Fixed tissue cell proliferation has not occurred to any extent nor are many polynuclear leucocytes present. In the tissues *both above and below the growth* and extending over an area at least double that of the carcinoma is a plasma cell proliferation together with many lymphocytes. The epithelium over these portions of the œsophageal wall is thickened irregularly. Stained by Weigert's method it is seen that the normal elastic fibres which underlie the epithelium are absent, not only near the growth or in the region of the plasma cell proliferation, but beyond this area where no inflammatory cells are present. As I have pointed out, absence of elastic tissue in positions where it is normally found and unassociated with a present tissue cell proliferation is a certain sign of old inflammatory change. The fact that indications of this change are present on both sides of the growth is as important as in the analogous condition of the rectum. The general appearances suggest then that in this case the growth was superposed on a chronic œsophagitis, and this conclusion is supported by examination of other specimens.

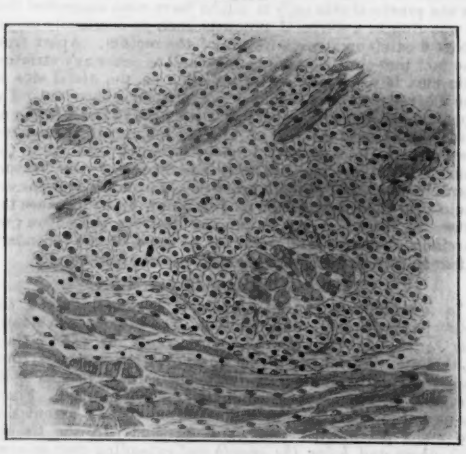
THE CONNECTIVE TISSUE IN RELATION TO ADVANCED EXTENSIONS OF PRIMARY CARCINOMA.

It has thus been shown that in all the forms of carcinoma studied by me the malignant epithelial ingrowth had been preceded by certain constant changes in the subepithelial tissue. These changes consist of a type of chronic inflammation characterised by the presence of plasma cells and lymphocytes as the main cell forms seen, the remaining cellular elements of the connective tissue being more or less quiescent, whilst there is a disappearance of elastin and collagen from the sustentacular framework. These changes in the subepithelial tissue, coupled with the epithelial hypertrophy which subsequently appears, constitute the *precarcinomatous state*.

It is of great interest to me, as a member of the Middlesex Hospital Medical School, to recall that our President, Mr. Henry Morris, and the late John Whitaker Hulke (also a member of our school and President of the College) were the first to recognise a precarcinomatous state. Mr. Morris's earliest reference to it dates back to 1875, whilst in 1884 he published in the Transactions of the Medical Society of London an account of the relation existing between epithelioma and ichthyosis of the tongue. In this communication he also called attention to the analogous disease of the vulva.

I have pointed out that relatively the connective tissue cell proliferation is most extensive in early carcinoma and that the tissues in which the growth is taking place are the seat of marked pre-existent changes. At the periphery of an advanced growth, however, the tissues that surround it not only show no changes of pre-existent inflammation but exhibit little or no tissue cell proliferation. They appear to be simply pressed aside by the tumour cells, and whilst the cellular elements, specialised structures, and elastic fibres undergo atrophy the white fibres become condensed or even augmented by an increased deposit of collagen. These changes are well seen in specimens of carcinoma of the tongue invading the deeper musculature of the organ, in advanced carcinoma of the cervix, and in extensive mammary growths. (Fig. 24.) This change in the behaviour of the connective tissues which characterises advanced extensions of the growth is associated with a different manner of epithelial invasion, so that instead of the diffuse and irregularly concentric spread which is typical of the early primary tumour a regular progression obtains which is restricted along certain lines of presumably least resistance.

FIG. 24.



Advanced extension of carcinoma of the tongue amongst muscle bundles, showing passivity of the surrounding tissue.

THE CONNECTIVE TISSUE IN RELATION TO PERMEATED LYMPHATICS.

The investigations of Sampson Handley carried out in the laboratories of the Middlesex Hospital Cancer Investigation Department have demonstrated that the majority of metastatic nodules in the case of mammary carcinoma are to be regarded as terminal outcrops of long lines of continuous lymphatic permeation. He also noted that the "healthy" carcinoma cells seen in the lymphatics at the extreme microscopic growing edge appear to excite no tissue reaction either in the lymphatic wall or outside it, and he states that "according to my observations the living cancer cell in its most active state, not degenerate from pressure or any other cause, exerts no attractive influence on the leucocytes." But he found that where the carcinoma cells had degenerated a process of perilymphatic fibrosis associated with lymphocytal aggregation occurred, which terminated in the destruction of the moribund tumour cells and the obliteration of the lymphatic channel. Thus it would appear that a mass of carcinoma cells when dead or dying excites in the tissues around it a reaction similar to that produced by other foreign bodies, but whilst living and active it produces no such reaction.

My own investigations support Handley's findings. There is a remarkable absence of any tissue reaction in the wall of a permeated lymphatic so long as the tumour cells contained within it exhibit no degenerative changes (Fig. 25). As the lymphatic distends the perilymphatic tissues undergo some condensation, and where a number of these are in close proximity this condensed tissue forms a stroma around their cross sections. Near the primary growth this thickening of the lymphatic wall is so pronounced as to suggest a new deposit of collagen there, for I have found no evidence of a preliminary fixed tissue cell proliferation to account for it. Elastic fibres occurring in the perilymphatic tissue are at first not altered but with the thickening of the lymphatic wall they atrophy and disappear. I have further found no evidence of any changes in the walls of the lymphatics prior to their invasion by the carcinoma cells, but along lymphatic tracts already the seat of permeation an abnormal number of lymphocytes are seen in the lymph channels. This may be ascribed (1) to the retirement of lymphocytes before the invading tumour cells, and (2) carcinomatous obstruction of the lymph vessels.

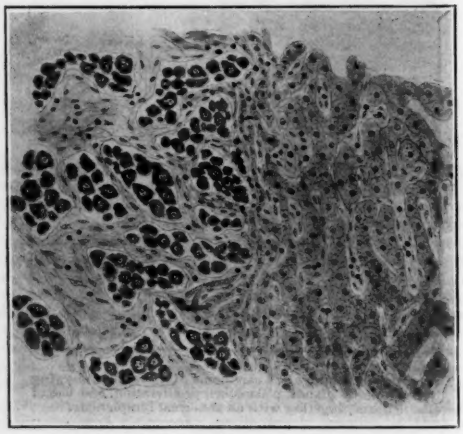
FIG. 25.

Carcinoma cells from a mammary growth lying in a lymphatic by the side of a small blood-vessel. The tissues of the lymphatic wall show no change.

THE CONNECTIVE TISSUE IN RELATION TO METASTATIC NODULES.

These nodules exhibit macroscopic appearances in strong contrast to those of the primary growth. Thus they tend to be spherical, to be sharply circumscribed, and to be moveable when the tissues in which they are growing permit of it. A primary carcinoma of the breast and a subcutaneous nodule secondary to it are good examples of these differences. The impression that these different macroscopic appearances indicate a different method of growth is confirmed by microscopic examination of metastases from various parts.

FIG. 26.



The edge of a hepatic metastasis from a case of primary mammary growth, showing the passivity of the invaded tissues.

Hepatic metastases.—The sharp edge of a hepatic metastasis shows an abrupt transition from the liver cells to those of the new growth. The only changes recognisable in this area are a compression and subsequent atrophy of the liver cells together with a moderate accumulation of lymphocytes. There is no evidence of these cells having

been produced locally, and their number is consistent with the suggestion that they have been expelled from the area of the metastasis by the cells of the new growth. Plasma cells are absent and there is little or no evidence of proliferation of the fixed tissue cells. (Fig 26.)

The stroma of the growth is densest in its central portions and is very acellular. It appears to be formed of the pre-existent connective tissue of the liver condensed and further augmented by collagenous deposit. Elastic tissue is absent from it, but the normal liver only shows these fibres in its larger areas of connective tissue. The general impression derived from a study of these growths is that the tumour cells are spreading into the liver tissue by a radial expansion between its fixed tissue elements, whilst the cells of the hepatic parenchyma suffer displacement and atrophy.

Renal metastases.—The appearances of early metastases in the kidney are, *mutatis mutandis*, similar in all respects to those met with in the case of the liver.

Subcutaneous nodules.—The circumscription of the subcutaneous nodule is very marked and the tissues up to its very edge are normal. The nodule itself consists of a number of carcinomatous alveoli lying in a dense fibrous matrix containing much collagen. This matrix exhibits very few cells. Those seen are mostly of the fixed tissue cell type, together with a certain number of lymphocytes, but no plasma cells are apparent. The matrix frequently extends beyond the limits of the outermost cells of the growth. This zone when present corresponds to the area of flattened liver cells seen in hepatic metastases and is formed by the compression and condensation of the surrounding normal tissues. Elastic tissue is seen at the periphery of the nodule but is absent from the central parts. The acellularity of the whole process, as far as the connective tissues are concerned, is very marked. (Fig. 27.)

FIG. 27.

Edge of a subcutaneous metastasis from a case of mammary carcinoma, showing the passivity of the connective tissue.

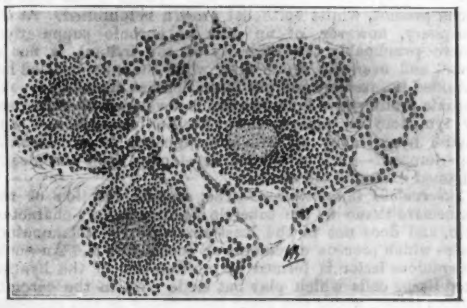
Carcinoma en cuirasse.—This form of carcinomatous growth may be regarded as an intermediate condition between a primary growth and a secondary metastatic nodule. We have seen that in the deepest parts of an advanced primary growth the inactivity of the connective tissue which characterises metastases is already apparent. In carcinoma *en cuirasse* this passiveness of the invaded connective tissue is well seen. The cells of the new growth are insinuating themselves diffusely into the meshes of the normal subcutaneous connective tissue. The tissues themselves are pressed aside and condensed, whilst the elastic fibres undergo atrophy. At the periphery of the process a certain number of lymphocytes are aggregated and small collections of them are also seen within the area of the growth, but there is no formation of plasma cells or proliferation of the fixed tissue cells. On the contrary, these latter atrophy and disappear, so that in the older parts of the infiltrated area the stroma is acellular. Here large areas are seen in which the carcinoma cells are degenerate.

Metastatic mammary carcinoma of the opposite breast.—It might be suggested that the differences in the connective tissues manifested in primary and secondary carcinoma respectively were due to the different sites in which they were growing and not to any inherent difference in the processes constituting the economy of the growths. Such a suggestion is, however, negatived by examination of metastatic carcinoma of one breast, secondary to a primary growth in the opposite organ. Here, as in the other examples of secondary nodules that I have cited, the connective tissues exhibits no active changes. A moderate number of lymphocytes are found in and beyond the stroma, but a tissue cell proliferation comparable with that seen in the primary growth is not present.

THE CHANGES IN LYMPHATIC GLANDS IN CONNEXION WITH CARCINOMA.

I have thus far reserved a consideration of the changes seen in lymphatic glands in connexion with carcinoma, because they differ in some important respects from those seen in the other areas of secondary carcinomatous invasion that I have mentioned. The enlargement of the lymphatic glands in a carcinomatous area begins before any of the cells of the growth have reached them. Microscopically this precarcinomatous enlargement is due to three factors: 1. The appearance of large germinal areas in the gland the cells of which exhibit many mitoses. 2. A great increase in the number of lymphocytes in the individual follicles. This increase is presumably chiefly due to the production of lymphocytes by the cells of the germinal areas, but, as I have already suggested, it may in part depend upon their expulsion from situations already the seat of carcinomatous invasion. 3. The appearance of plasma cells in large quantities in the stroma and capsule of the gland. When the number of these cells is very large they extend into the peri-adenoid tissue, but there is no increase in the hyaline tissue cells that normally occur in the stroma. (Fig. 28.) It is thus apparent that the

FIG. 28.



Precarcinomatous enlargement of a lymphatic gland, showing hypertrophied follicles, large germinal areas, and diffuse plasma cell proliferation.

precarcinomatous lymphatic gland exhibits the same cytological appearances as characterise the inflammatory proliferation going on around the early primary growth. The suggestion that these changes are due to bacterial absorption from an ulcerating primary growth is negatived by their occurring equally in non-ulcerated carcinoma of the breast.

I have not obtained sufficient material from cases of precarcinomatous inflammation to study conclusively the effect of these states on the neighbouring lymphatic glands. Clinically the glands are often somewhat enlarged in these conditions, and pathologically it has been demonstrated that new lymph nodes surrounded by plasma cells are frequently seen in regions of leukoplakia inflammation. I have investigated ten specimens of axillary glands removed together with the breast, which was proved microscopically to be the seat of mastitis alone. These show abnormally large germinal areas and some increase in the gland stroma with a certain number of plasma cells therein, and thus afford evidence of an early condition of that change met with in lymphatic glands in connexion with carcinoma, and are an argument that these changes are produced by the antecedent inflammation and not by the carcinoma itself.

The invasion of lymphatic glands by carcinoma cells takes place from the centre outwards. The lymphocytes are evidently subjected to compression and surround the growth in closely packed concentric rows. There is no

evidence of their destruction by the carcinoma cells and they appear to be simply expelled from the gland so that in the later stages they are only seen in considerable numbers immediately under the capsule. A certain number, however, remain in the stroma of the growth. This stroma is as a rule scanty and appears to consist of the original reticulum of the gland together with many plasma cells, which on account of their fixity in the tissues are unable to retire before the advancing epithelial cells. In the older part of the stroma the plasma cells together with its other cellular constituents atrophy, whilst the fibrous elements become compressed and denser.

THE QUESTION OF THE SPECIFICITY OF THE CONNECTIVE TISSUE CHANGES WHICH PRECEDE AND ACCOMPANY CARCINOMA.

The question of absolute specificity in regard to the tissue changes accompanying carcinoma is at once negatived, because it has been shown that identical histological appearances characterise those inflammatory conditions which appear always to precede the occurrence of epithelial ingrowth. The inquiry is thus reduced to a comparison of the condition of the connective tissue in carcinoma and precarcinomatous states with that met with in other forms of inflammation.

Acute suppurative inflammation.—The condition of the connective tissues in acute suppurative inflammation bears no relation to that seen in the states we are investigating. Polynuclear leucocytes are the conspicuous objects of the microscopic field. The fixed connective tissues are pressed aside by their aggregations, and are in a condition of acute degeneration or actual necrosis, whilst epithelial cells involved in the process share the same fate.

Chronic suppurative inflammation.—In the earlier phases of chronic suppurative inflammation the connective tissue changes bear no likeness to those of the carcinomatous states. Polynuclear leucocytes and hyaline tissue cells are alone present, whilst epithelial growth is inhibited. At the periphery, however, of an area of chronic suppuration, where presumably the intensity of the irritant is not so great, and over the whole area when the inflammation has subsided in intensity and pus formation has ceased, a type of chronic proliferative inflammation is developed characterised by lymphocytes, plasma cells, fibrillar changes and epithelial hypertrophy on which malignancy is occasionally superimposed—e.g., carcinoma developing upon chronically inflamed scars and old ulcers.

Tuberculous inflammation.—The specific reaction of the connective tissue to the tubercle bacillus is very characteristic, and does not in the least resemble the inflammatory states which precede carcinoma or accompany it. An acute tuberculous lesion is formed by proliferation of the hyaline fixed tissue cells which play but little part in the carcinomatous states, whilst the giant cells found in this condition are conspicuously absent in carcinoma. Lymphocytes are sparsely present at the edge of an early nodule and plasma cells are only occasionally seen. In some special forms of tuberculous inflammation, however, such as chronic lupus, the hyaline "endothelioid" cells are few, lymphocytes are increased in number, and plasma cells make their appearance in large quantities, whilst the elastic tissue has previously disappeared. Moreover, in these secondary conditions the vascularity of the diseased area is increased and epithelial overgrowth occurs. It is on such an area that carcinoma may subsequently develop.

Syphilitic inflammation.—The cytological appearances of the connective tissue in a primary chancre resemble those seen in the carcinomatous states much more closely than is the case in an acute tuberculous lesion. Thus from an early period plasma cells and lymphocytes are conspicuous objects. On the other hand, there is a very much greater degree of hyaline fixed tissue cell proliferation. Moreover, the intensity of the irritant is such that epithelial proliferation is inhibited, and though abnormally long and narrow epithelial processes are seen at the margin of the inflamed area, yet the picture suggests an invasion of the epithelial cells by the connective tissue elements and not *vice versâ*. Many polynuclear leucocytes are also present.

In acute secondary lesions some plasma cells and many lymphocytes are seen, but there are also a great number of polynuclear leucocytes; whilst all the cells in the inflammatory area are tending towards necrosis. In long continued inflammation of syphilitic origin these appearances give place to those that are typified in chronic superficial glossitis.

Summary.—To summarise, then, we see that the connective tissue changes associated with established carcinoma are identical with those met with in precarcinomatous states. And, moreover, we see that these precarcinomatous states can be attained by many different routes, starting in inflammatory conditions which histologically are at first quite distinct from one another and which are initially due to entirely different forms of irritant. This fact is of great interest, because logically one would expect that each form of irritant would lead to its own peculiar form of tissue reaction and within limits experimental research supports such a view. In short, it is conceivable that the immediate agent of the precarcinomatous states may be identical in them all, although the initial changes in the tissues were due to totally different causes.

THE STRUCTURE OF THE STROMA.

The elements of the stroma may be divided into two: (1) those that were pre-existent and (2) those that are newly formed.

1. *Pre-existent elements.*—The pre-existent elements consist chiefly of hyaline fixed tissue cells, together with their fibroglia processes. These cells do not appear to be destroyed by the plasma cell and lymphocytal proliferation that is taking place at the margin of the primary growth, for they may be seen lying unaltered amongst them and occasionally exhibiting mitoses. As the epithelial masses advance they are pushed aside and compressed and in the older portions of the stroma the cellular elements tend to atrophy, the fibroglia fibres alone remaining. There is, however, no evidence of their actual destruction by the carcinoma cell. In the more peripheral parts of the stroma pre-existent elements other than the fixed tissue cells occur. Thus, certain elastic fibres which have escaped destruction by the plasma cell and lymphocytal proliferation may be seen, together with isolated muscle fibres or parenchyma cells. All these elements, however, atrophy and disappear, whilst the hyaline fixed tissue cell is still intact. In advanced tumours of rapid growth the stroma in the central areas is entirely acellular and appears to be undergoing degenerative changes coincidently with the epithelial cells.

2. *New formed elements.*—Where a marked plasma cell proliferation has preceded the growth, as at the primary site and lymphatic metastases, these cells form part of the stroma. Subsequently to their inclusion in it they lose their characteristic shape and staining reactions and become compressed, elongated, and increasingly hyaline in appearance, whilst in the oldest parts of the stroma they atrophy and disappear altogether. A certain number of lymphocytes also remain in the stroma to a late period. There is very little proliferation, however, of the hyaline fixed tissue cells, but occasional mitoses both in them and endothelial cells are observed. Besides these new cell elements it has been shown that in certain circumstances local deposits of elastin take place, and further that much of density of the central portions of the stroma is probably due to a new deposit of collagen in or around the fibroglia processes of the tissue cells. It would, however, appear that the elements of new formation are usually more than compensated for by the expulsion of all mobile cells from the tumour area and the destruction and absorption of collagen, elastin, and parenchymatous elements which are going on at the margin of the growth, so that in most cases the bulk of the stroma does not equal that of the tissues which originally occupied the area of the growth.

ON THE NATURE AND SIGNIFICANCE OF THE CONNECTIVE TISSUE CHANGES IN RELATION TO CARCINOMA.

Finally, it is necessary to pass to a general consideration of the nature and significance of the connective tissue changes in relation to carcinoma in the light of the results of this investigation.

It has already been shown that the carcinoma cell does not act as a *specific* irritant, and further there is reason to believe that it does not act as a tissue excitant at all *per se*. For, as has been demonstrated, in advanced extensions of a primary growth the tumour cells penetrate *beyond* the area of the tissue cell proliferation and lie between the tissue elements without exciting in them any reaction whatsoever. This passivity is still more marked in the tissues surrounding permeated lymphatics, whilst in metastases the invaded connective tissue is equally inactive. The difference that obtains in invaded lymphatic glands is apparent only since the tissue changes seen in them occur before the carcinoma cells reach them.

The suggestion that the carcinoma cell may only act as

an irritant to certain tissues and not to others is negatived by the contrasting appearances afforded by a primary carcinoma of the left breast and one of its metastases in the right. If the carcinoma cell does not act as a tissue irritant, to what, then, is the tissue cell proliferation characterising the primary growth due? In endeavouring to answer this question it must first be noted that in all the specimens examined an identical type of inflammation had preceded the onset of malignancy and that where the carcinomatous ingrowth is as yet only foreshadowed a condition of the subepithelial tissues cytologically identical with that surrounding the fully developed tumour is already present. Further, there is the fact that clinically carcinoma is initiated in the earlier and more cellular phases of the precarcinomatous states. Thus there is both pathological and clinical evidence that the tissue cell proliferation accompanying a primary carcinoma is initiated before the onset of malignancy—a suggestion supported by the occurrence of new lymph nodes surrounded by plasma cells in the precarcinomatous state and the precarcinomatous affection of lymphatic glands. The fact that the precarcinomatous state may be led up to through a variety of forms of inflammation has already been noted and it has been suggested that the immediate agent of this state may be the same in all cases.

Turning now to the question whether an altered state of the subepithelial tissue bears a relation to the determination of carcinomatous invasion, it appears certain that ingrowth of epithelium is closely associated with changes in the tissues underlying it, and, moreover, there is strong evidence that this ingrowth is subsequent to the tissue change. For it has been shown that in the case of the cervix uteri a system of connective tissue papillæ and interpapillar epithelial processes is developed in a situation where these structures do not normally exist and that epithelial downgrowths are initiated on local areas of plasma cell proliferation and loss of elastic tissue. And further, it has been demonstrated that when the subepithelial tissue cell proliferation first takes place the epithelium is actually thinner than normal and that its hypertrophy only develops after the subepithelial changes are established.

That which is so clearly seen in the case of the cervix is also true of the other situations that have been studied—namely, that the hypercellularity of the subepithelial tissue *precedes* the multiplication of the epithelial cells. Thus the inflammatory conditions of the vulva, the tongue, and the skin, which in time lead up to the production of the precarcinomatous state in these situations, are at first associated with thinning or actual destruction of the epithelium, and it is only when the character of subepithelial tissue is entirely altered that the deep interpapillar processes which characterise the epithelial hypertrophy appear.

ON THE VALUE OF THE TISSUE CHANGES IN RELATION TO PRIMARY CARCINOMA.

It follows that the tissue cell proliferation accompanying a primary carcinoma cannot be regarded as protective, and this opinion is further supported by the following arguments: 1. There is no evidence of any destruction of the active carcinoma cell by the tissue cells comparable with those seen in areas of bone necrosis or experimental tissue implantations. 2. The infiltrative character of the primary tumour is in marked contrast to the circumscription that obtains in permeated lymphatics and to a lesser extent in metastatic nodules (excepting those in lymphatic glands), in both of which latter conditions no tissue cell proliferation occurs. 3. Lymphatic glands, which alone of metastatic sites exhibit a precarcinomatous tissue cell proliferation, are earliest and most constantly affected. 4. The tissue cell proliferation results in a rarefaction of the connective tissue in front of the advancing carcinoma cells, in the course of which mechanically resistant structures such as fibrous tissue and elastic fibres become softened and destroyed.

On the other hand, whilst there is no evidence of active destruction of the carcinoma cells by the proliferating tissue cells, neither are there indications of any active destruction of the inflammatory tissue cells by the carcinoma cells. It is true that in the older parts of the growth, areas in which the stroma is degenerating are often seen, but in such areas a coincident degeneration of the epithelial cells is also present. Vigour of carcinoma cells accompanies vigour of tissue cells, senescence of carcinoma cells equally accompanies senescence of the stroma.

CONCLUSIONS.

1. The onset of the ordinary forms of carcinoma is always preceded by a condition characterised by epithelial hypertrophy and certain constant changes in the subepithelial tissue. 2. This precarcinomatous state may be attained through various inflammatory processes, at first quite distinct from one another, but culminating in the same histological picture. 3. The tissue cell proliferation occurring around a primary carcinoma is a part of the precarcinomatous process and materially assists the progress of the growth. 4. There is no histological evidence of a protective reaction on the part of the tissues to the carcinoma cell. 5. Though changes in the adjoining connective tissue bear some very close relation to the cause of epithelial ingrowth, yet malignancy having been established the further spread of the tumour is independent of such assistance.

My pleasant duty now remains to express my grateful thanks to Mr. Walter Emden, to whom I am indebted for the scholarship I hold; to Dr. Walter S. Lazarus-Barlow, the director of the Middlesex Hospital Cancer Investigation Department, for help, encouragement, and valuable criticism; to my colleagues in the laboratories for much assistance; and to Dr. N. H. Alcock, of St. Mary's Hospital, for the beautiful colour photo-micrographs he has made for me.

ANALGESIA *v.* ANÆSTHESIA IN OBSTETRICS AND GYNÆCOLOGY.[1]

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THE prevention or relief of pain has been one of the chief aims of medicine and surgery through all the generations of men. Human nature shrinks instinctively from physical suffering and the trained professional instinct endeavours to come to the rescue. Hence the evolution of professional invention and skill devoted to the relief of suffering, and nothing has stimulated the intellectual faculties of the medical profession towards this end more than the contemplation of the physical sufferings of women. It will not do to load the practical remarks which it is my chief object to make with general considerations of pain and its relief, so I must come at once to close quarters with the practical considerations, and formally set aside the largest and the most important portion of the subject of physical suffering and its medical relief—inflicted pain to the surgical degree.

It is only within comparatively recent times that a clear distinction has been drawn between surgical pain and obstetric pain. The first we associate with the worst ills and even the tragedies of human life; the other is largely physiological pain. Obstetric pain is strictly temporary and when it reaches its termination by a physiological process "she remembereth no more the anguish." Hence probably it arises that until the development of the humaner sentiments and freer thought among the nations of Europe we observe a certain callousness in regard to the treatment of the sufferings of childbed. Was it not, after all, the fruits of the doom pronounced in Eden? This indifference is also partly explained perhaps by the attendance almost universally by midwives, because the accoucheuse instead of contemplating sympathetically the sufferings of her patient would be eager to boast of the agonies she herself had heroically endured in her time! Associated with physiological suffering perhaps more than with the severer forms we must always also remember certain psychic conditions, including the fear of death, urgent often in inverse ratio to its imminence, but the treatment of which nowadays must form some portion of the function of the obstetric physician. Before women became so highly civilised and sensitive the obstetric form of suffering received very little attention. The treatment of the surgical form at its worst, as seen in the cockpit of a battleship, illustrated the poor resources of surgical science for generations. Sedation was produced by alcohol and by loss of blood, and many sufferers must have consciously preferred death by alcoholic poisoning to the end that would ultimately come through exhaustion by pain like release to the crucified. Sedation by alcohol, then, was the typical method by which suffering either corporeal or mental was assuaged. It was only comparatively late in Europe at least that vegetable substances with sedative action came into

[1] A paper read at a meeting of the North of England Obstetrica and Gynæcological Society, April, 1908.

more or less general use. As far as obstetric pain was concerned sedatives do not appear to have been generally employed by members of the medical profession until after the middle of the eighteenth century, and that only in exceptionally severe cases. All the ordinary cases were in those days managed by women whose practice was influenced by mere superstitious observances on a foundation of brutish ignorance.

For the work of the man-midwife, if you take for example the practice of Smellie, when he was called in to a difficult or painful case, you find that his method appears to have been partly strong assurance that his skill could bring relief, partly the external application of warmth, and partly substituted pain, that is to say, the production of genuine distress in the stomach and bowels by highly spiced and pungent draughts or "cordials" in place of the suffering arising in the uterus owing to abnormal pains resulting from some pathological condition. Amongst the few men of mark as obstetricians of the eighteenth century who employed genuine sedatives for the relief of puerperal pain we shall find Denman perhaps the most prominent, independent, and humane. From Smellie to the introduction of anæsthesia by gas or vapour we reckon nearly three-quarters of a century. That was the era of patience and cleanliness in English obstetric practice. The results under normal conditions were then about the best that the world had ever seen before or has ever seen since. This description also applies to the work of Boër of Vienna, who had adopted English methods after his famous journey through Western Europe in the years just before the French Revolution. In those days there was little or no advance in the administration of sedatives in obstetric practice over the methods of Smellie and his contemporaries, and few showed in their practice the enlightenment and humanity of Denman. In abnormal cases—as, e.g., in obstructed labour—the prolonged agony of the patient must have been something terrible to contemplate.

Towards the middle of the nineteenth century we arrive at the introduction of chloroform, ether, laughing-gas, and other chemical anæsthetics in the gaseous or vaporous form. The first impressions of chloroform in Edinburgh, as described in contemporary writings, prove it to have been received as a perfect anæsthetic. I can only refer to, though I cannot take time to quote, the curious account of von Arneth, the friend and former colleague of Semmelweis, who was a visitor in Edinburgh early in 1851. So harmless and interesting the administration of chloroform appears to have been considered that one takes the impression it was enjoyed as a sort of parlour game among medical and scientific circles of modern Athens at that time! As in the history of every other anæsthetic or potent drug, later experience brought a certain chastened opinion of its advantages and disadvantages. Chloroform as administered in obstetric practice, which was the prevailing use of it at first on account of Professor Simpson's influence, brought disappointments. Its shortcomings were soon fairly demonstrated, especially by Simpson's rivals, to be very much what the experience of half a century has taught us all to accept as the truth. The administration of chloroform had certain unfavourable effects upon the pains of labour; when long continued it prevented firm contraction, and it produced post-partum hæmorrhage, ending in hæmostasis by thrombosis instead of by contraction, and consequent puerperal fever in the form of metrophlebitis. Although since then it has been abundantly proved that ether is in many ways a less harmful anæsthetic than chloroform in obstetric practice British conceit had no expression except the language of contempt for the opinion of American obstetricians who had almost universally adopted ether as the obstetric anæsthetic.

It will be of interest to review some of the most important attempts made in the course of the last half century to find substitutes for the vaporous or gaseous anæsthetics, whose drawbacks and dangers were generally recognised but seldom too frankly described. Substitutes were sought for: eloquent witness to want of satisfaction.

1. *Morphia, &c.*—One would think that the most obvious of the substitutes as an analgesic was opium in some form or other, and yet if we look through the professional writings of the last 30 years there are fewer contributions on the use of morphia in obstetrics and gynæcology than on any other means of preventing or relieving pain; in fact, from Pinard's contribution in 1876 to that of Wasenius there is next to nothing to be found worth quoting with regard to the use of morphia pure and simple. The report of Wasenius was published this year.[2] It is entitled "Experimental Investigations on the Subject of Uterine Contraction during Labour as well as on the Influence of Ether and Morphia on Labour Pains." We have heard for many years now of the therapeutic use of morphia in eclampsia, and we are unanimous on the advantages derived from the administration of full doses of morphia to eclamptic patients, and yet most of us can remember well the confidence with which midwifery teachers and bookmakers denounced such treatment as homicidal. Evidently an ignorant prejudice against opium has existed since the eighteenth century or before. The chief conclusion of Dr. Wasenius, whose work was done in the Obstetric Department of the University of Helsingfors under the supervision of Professor Heinricius, and is admirable in its patient conscientiousness and scientific exactitude, amounts to this: that a dose of one quarter of a grain of morphia administered hypodermically towards the end of the stage of dilatation or during the process of expulsion produces next to no effect on the regular process of labour; it does not affect the frequency, the duration, or the force of the labour pains. The analgesic influence of the morphia is good; within six minutes after the hypodermic injection the sensitiveness during a pain begins to be dulled or diminished. "The parturient woman has snatches of sleep between the pains and it is only about four hours after the administration of the sedative that she begins to complain again at the onset of a pain."

2. *Spinal anæsthesia.*—The sedation by injection of cocaine into the vertebral canal was a great step in advance in producing sufficient effect to permit of painful and fairly prolonged operations in the abdomen and pelvis when it seemed desirable to avoid general anæsthesia, but, like all analogous processes requiring manipulative skill and sound judgment, it was at first subjected to gross abuse, and in the hands of many experimenters became a source of positive danger to the patients. Referring as before to one typical article on the subject, I would select a contribution that is easily accessible to all—viz., that of Dr. Friedrich Brunner published in the *Monatsschrift für Geburtshülfe und Gynäkologie* for November of last year (Band XXVI., Heft 5). It is a report from Professor Amann's Klinik at Munich. The contribution is entitled, "Über die Erfolge der Lumbalanästhesie bei gynäkologischer Operation." After describing the usual sensations produced by the injection Brunner is frank enough to mention a few of the unfavourable symptoms which the medical practitioner should constantly bear in mind when contemplating the adoption of spinal anæsthesia in any given case. Among these he enumerates a sense of anxiety, a feeling of suffocation, mental confusion, outbreaks of perspiration, trembling of the limbs, cramps, nausea, and vomiting. Among the after-effects he mentions headache, backache, vomiting, sleeplessness, loss of appetite, and sense of weakness. In a considerable proportion of cases a high temperature has been observed and some fatal cases have been reported. From the first publication by Bier in 1899 calling attention to lumbar anæsthesia, after a certain vogue it rapidly went down in favour, but following the introduction of certain improvements and the gradual growth of information as to the nature of the cases suitable for the method, it has revived to a large extent. Cocaine solution was found to be too poisonous, but with the substitution of eucaine, tropacocaine, stovaine, and especially of novocaine, mixed with adrenalin, suprarenin, or similar substance, great advances have been made in lumbar anæsthesia in its efficiency and safety. Still, so recently as January of last year, we have Dr. Anselm Falkner reporting from Chrobak's Klinik in Vienna, cases illustrating all the most unpleasant symptoms produced by the most improved methods of *Rückenmarksanästhesie*.[3] It has been found that the effects of spinal anæsthesia on the process of normal labour are simply disastrous. In obstetrics it finds its best application in the severest operations such as Cæsarean section. It may, however, serve a useful purpose in many painful gynæcological operations.

One of the most strenuous advocates of lumbar anæsthesia is Professor von Valenta of Laibach who contributes to the *Gynäkologische Rundschau* for January, 1908, an article entitled "150 Gynækologische Fälle operirt unter Lumbalanästhesie mit Tropakokain." He speaks in terms of almost extravagant praise of the advantages of the new process and

[2] Archiv für Gynäkologie, Band lxxxiv., Heft 3.
[3] Zentralblatt für Gynäkologie, No. 3, 1907.

he proves his confidence by giving a detailed list of 150 gynæcological operations in which he employed it with entire satisfaction. These operations include 37 abdominal and 13 vaginal sections, 46 plastic operations on the vagina and perineum, and all the varieties of minor operation. The anæsthesia was complete in 127 cases and some pain was complained of in 17. There were some unpleasant by-effects in a considerable proportion of the cases, but von Valenta is somewhat reticent in his account of these. The operations appear to have been performed entirely in the public provincial hospital. Considering the technical difficulties and the by-effects of the drug so administered, it is safe to predict that there is no future for lumbar anæsthesia in the private surgical and obstetric work of the medical practitioner in this country or in any other.

3. *Morphium-scopolamine.*—Since the first introduction of this method of analgesia during parturition by Schneiderlin in 1900 a vast number of experiments have been tried in many German lying-in hospitals. At first, as usual, the reports were altogether favourable. The action of the combination during labour was simply perfect. It produced no shadow of an injury or drawback to mother or child. The method had all the advantages without any of the drawbacks of all the other tentatives at the production of obstetric analgesia. It was only so recently as 1900 that the *Morphium-Skopolaminnarkose* was first introduced, and in six years, after all the eulogies to which I have referred, it may now be said to have received its final condemnation as too dangerous both for mother and child, and unsatisfactory in most other respects. The most favourable and uncritical report has been that of Gauss, founded on a thousand cases observed in the Obstetric Klinik of Freiburg. His words are "a narcotic absolutely devoid of danger for mother and child." Any disturbances in the process of labour that may have been observed are to be attributed to too high doses of morphia. One wonders how Gauss got to know this important fact considering that the drugs were always given in combination. In his final publication, in spite of certain phenomena which he had observed, especially asphyxia in a large percentage of the newly born, he still asserts "Morphium-scopolamine is a hitherto unattained method by which in the cause of humanity the suffering of the woman in labour is reduced to its smallest possible degree."

In other reports of observations which began to appear serious differences of opinion soon became obvious. Among these a contribution by Karl Voight of Jena in the *Monatsschrift*, Band xxii., Heft 6 (December, 1905), gives a full bibliography. The last of these reports which I have seen is that of Gminder, founded on 100 cases observed in the Frauenklinik of the University of Erlangen.[4] Of the 100 cases in only 58 was the action of the drugs considered satisfactory. In 27 cases the process of labour was interfered with to an important extent. In four cases complications appeared, affecting the mother, and post-partum hæmorrhage resulted in five cases owing to atony of the uterus. Entirely owing to the narcotic 11 children showed severe, and 12 children slight, signs of asphyxia. Gminder concludes that morphium-scopolamine narcosis is dangerous for the child, and he also answers the question, "Is it dangerous for the mother?" in the affirmative. He concludes by warning the medical practitioner against the use of morphium-scopolamine in private practice.

But the morphium-scopolamine narcosis—Dämmerschlaf—in obstetrics had received its death-blow more than a year before. It was discussed at a meeting of the Obstetrical and Gynæcological Society of Berlin in July, 1908, and condemned by all the members who had had any experience of it. The subject was introduced for discussion by a contribution from Hocheisen entitled "Über Geburten unter Skopolamin-morphium." Hocheisen considered that the danger of scopolamine and the unreliability of its action must prevent its introduction as an analgesic in normal labour. In spite of the reduction of the dose to a minimum many deaths have been reported (zahlreiche Todesfälle). In Bumm's Klinik observations had been made in exact conformity with the method of Gauss at Freiburg, and they had experienced some unpleasant by-effects of the drugs. Subjective by-effects were observed in 70 per cent. of the cases. In 50 per cent. the duration of labour was prolonged to an important degree. In the third stage of labour the separation of the placenta was delayed and there was a tendency to hæmorrhage, and Hocheisen had taken the impression that involution in the puerperium was hindered. Of the children, 18 per cent. were born in a poisoned condition and 15 per cent. were asphyxiated in consequence of the prolongation of labour. Scopolamine is in no way suitable for private practice, especially inasmuch as the practitioner after he has begun the administration of morphium-scopolamine must in no circumstances leave the patient for at least two hours after the expulsion of the placenta, and the new-born with symptoms of poisoning must receive attention for the same length of time at least.

Von Bardeleben, as Professor Bumm's assistant, had at the suggestion of his chief made some observations on the effects of the morphium-scopolamine processes. His first impressions were favourable apart from the unpleasant by-effects which were seldom absent. These were thirst, dryness of the throat, and often nausea and vomiting. The first disadvantage which he noted was the uncertainty of action of the narcotics; then there was an unfavourable effect upon the action of the uterus and abdominal muscles. The intervals between the pains were prolonged to a marked degree; the individual contractions lost their intensity and had no clear acme. The influence of the pains and the abdominal pressure led to a distinct prolongation of the process of labour which had been normal before the injection of the scopolamine, so that labour had to be finished by operation in six of the cases. Von Bardeleben also agreed with the observations of the others regarding the asphyxiation of a remarkably large proportion of the new-born. Two at least out of 60 children lost their lives through the action of the drug. In three of the patients there was marked atony of the uterus. Von Bardeleben considers the skopolamin-Dämmerschlaf as not a subject concerning which there need be any discussion as to the best method of administration; it would be better to give it up altogether as a process which places both mother and child in danger either directly or indirectly. Gauss, who was present for the occasion, attributed Hocheisen's mishaps to a "false technique." He admitted that at first at Freiburg about 20 per cent. of the children were born apnœic, but with more experience they had greatly reduced this proportion. Professor Bumm said that when he first read about Gauss's excellent method he reproached himself that he had not learned about it sooner in order to give his patients the advantage of it. He then had come to the conclusion that nothing had been lost by the delay. The method of the administration of the narcotics, which they had carried out at the Charité, was exactly that which Gauss had prescribed, and they began with very small doses. The defect lay not with them but with the action of the combined narcotics. "I maintain," said he, "that the administration of such a dangerous poison as scopolamine is not desirable, and I believe the method cannot be recommended to the general practitioner who would have to sit for hours at the bedside of his patient. The serious nature of the poisoning and its effect in delaying labour with all its consequences would render this necessary."

4. *Morphia alcohol-cocaine.*—The combination of sedatives to which I wish specially to call your attention is one of which I have had considerable experience extending over several years, and I can consequently speak of it with some confidence. Of the use of morphia and alcohol in modifying the suffering from labour pains I will confess that I have had very little experience, and I bring forward the subject now in the hope that some members who have the opportunity in lying-in hospitals to make careful observations, either personally or by deputy, will give the subject some attention. I am not without hope that some of the residents in our lying-in hospitals and workhouses will be found to make observations with the same exactitude and patience as those reported to us from the continent of Europe on the effects of alcohol alone and of the morphia-scopolamine combination. I know of no better model of such observation than that of Dr. Wasenius of Helsingfors.

About the advantages of the morphia-alcohol-cocaine analgesia in the smaller painful operations of the puerperium, and in some of the minor gynæcological operations and manipulations, I can speak with entire confidence. When I called the attention of one of the obstetrical and gynæcological societies of London to the subject some years ago, one of the members asked me if I was not afraid of making my patients morphinomaniacs! It appeared to me that there was an absence of the sense of due proportion implied in the question. It is hardly arguable; one might as well have seriously discussed with some of the junior members who, on the same occasion, thought it not indecent to indulge in small impertinences about "whisky," the danger of making

[4] Hegar's Beiträge, Band xii., Heft 2, 1907.

our patients drunkards if we prescribed, as most of us do on occasion, some modicum of alcohol for purely therapeutic purposes. But frivolous objections meet us at every point if our proposals are not worn out with conventionality. It is considerably over a century since Denman recommended small doses of the tinctura opii for the relief of extremely violent after-pains, adding "though much clamour hath been raised against the use of this medicine for women in childbed." Disregarding frivolous objections, then, let us consider the points in favour of this method of analgesia under consideration and any genuine drawbacks that a frank and honest consideration of the subject may bring into notice.

In favour of the method when judiciously applied, it can be fairly claimed that the psychic influence is favourable. The patient is in pain or she knows she is going to suffer pain by some proceedings which are to her an "operation," and she is in fear and suspense; but by the time she is duly prepared for the manipulations her terror has vanished and she has become altogether or almost apathetic. On the physical side the method has some special advantages in circumstances when general anæsthesia is contra-indicated, as, for example, in severe lung and heart diseases, in case of goitre, or when, owing to septic conditions, the pulse is very rapid or running and the respiration is of the ominous quality corresponding to the action of the heart. In the second place, the analgesic effects can be made without danger sufficiently intense for the object in view by a slight modification in the relative amount of the dose of morphia or alcohol, according to the known habits of the patient or according to the temperament which is often associated with racial qualities. This possibility of greatly modifying or increasing the ingredients without danger is one of the chief merits of the method. The use of cocaine, which I take as the type of the class of drug, the local anæsthetic, is not constant; in fact, it is often unnecessary or superfluous. The typical case for its use is in treatment requiring the production of some small wound, or the presence of painful laceration or fissure which requires to be thoroughly cleansed and disinfected as the first step in the treatment. The typical case of painful laceration is that of the perineum which has become septic or pseudo-diphtheritic and inflamed.

The objections to the administration of alcohol are very much on the same level as the fear of morphinomania. It is only in the United Kingdom and among that small fraction of the medical profession which is henpecked in the United States that we find objections to alcohol as a therapeutic agent carried to irrational extremes. Throughout the continent of Europe, where scientific obstetrics and gynæcology have reached their highest developments, and where alcohol is not so generally abused by the population as in this country, we find the administration of the alcoholic beverage as a therapeutic agent universally employed, and in no class of grave disease do we find alcohol employed with such confidence and apparently with such beneficial results as in the treatment of puerperal sepsis. Then, after all, the administration of a sufficient dose of alcohol without offence to our patients in this country is merely a small question of detail. The alcohol can be introduced into the patient's bedroom in the ordinary six or eight ounce bottle from the chemist as a medicine made up according to a prescription so disguised that no one could recognise the nature of the drug. But my belief is that the objection to alcohol *as medicine* on the part of our patients is vastly exaggerated by some extremists, lay and professional. During the many years I was in general practice I met with only one fanatic teetotaler who declared that he would rather allow his wife to die than that a drop of whisky or brandy should cross her lips. He was not a consistent fanatic, because when he became somewhat grievously ill himself he swallowed the poison with avidity.

But it may be asked with reason, Is the alcohol a necessary ingredient in the analgesic? I can only say in reply that I have tried the morphia alone and with other sedatives and I believe the combination of morphia and alcohol to be the best yet discovered.

Let us now, and just for a moment, consider the method of employing our analgesia in preparing the patient for operative treatment. I have had very considerable experience of it in the necessarily cautious, one might say tenderly solicitous, dilatation of uterine stenosis in dysmenorrhœic sterile wives who are so often subjected to the disastrous outrage of rapid mechanical dilatation and laceration under general anæsthesia, but the typical case which I would prefer to take in illustration is that of curettage in puerperal sepsis. Here arises the question of anæsthesia; chloroform or ether should be administered only in exceptional cases. Weakening of the heart's action must be avoided, especially when the pulse is very rapid or perhaps almost running, and the respiration is already becoming ominously shallow and rapid. The anæsthetic may then just turn the scales against the patient. Then it should also be remembered that many patients dread general anæsthesia more than the operation. The following method will be found sufficient for curettage. About three-quarters of an hour before the time fixed for the operation the patient gets a full dose of morphia hypodermically—a quarter of a grain, more or less, according to her bulk. Half an hour or 20 minutes before the time appointed for operation she receives a soothing draught consisting of about two or three fluid ounces of whisky or brandy disguised and diluted. If she is accustomed to alcoholic beverages, as most of our hospital patients are, she must get more. My favourite disguise is liquid extract of liquorice. By the appointed time, when everything is ready, the most timid patient has become apathetic. With all appliances placed within reach the operation can now be performed with the help of the midwife or nurse.

The patient is placed on a suitable table in the proper position. If there is laceration of the perineum it is well, as a preliminary, to mop the surface which has to be cleansed with a solution of cocaine, eucaine, or novocaine. The parts are exposed and then thoroughly swabbed and cleansed with pledgets of absorbent cotton-wool soaked in sublimate solution about 1 in 2000. The "sharp" curette now comes into play. The uterus is seized with a suitable volsella on the anterior surface of the cervix, well away from the os, and carefully brought down; that the tissues are friable must be constantly kept in mind. The blade of the curette hardly ever meets with any resistance at the internal os and it is passed on to the fundus. The manipulations now proceed deliberately in all their details. The final step is to pack the uterus and vagina with gauze soaked in sublimate solution. After the operation is complete the patient, who hardly ever makes a murmur, is now put back to bed, and as a rule she promptly goes to sleep. Before she is permitted to sleep it is a good plan to give a full dose of ergotin, either hypodermically or as a draught; and it is useful in most cases to give a copious injection of saline solution by the bowel. This is also the best time for the injection of polyvalent serum—all manipulations which now cause no discomfort.

A former generation of physicians believed in opium as a specific or "sheet-anchor" in puerperal fever. But there were many sheet-anchors long before their time. Generations of men believed that if you could only salivate the puerperal fever patient she would recover and they administered enormous doses of calomel. Then more recently the use of large doses of alcohol, associated with the name of Max Runge, were believed by many eminent obstetricians to be a sort of specific. Now, it will be seen in the treatment supplementary to curettage here recommended we have the advantage of three of the sheet-anchors. If some of the slighter symptoms of mercurial poisoning occur they can be watched with "entire satisfaction" as favouring the prognosis, and the mercurial depression is relieved by the alcohol.

A great advantage of the method consists in this: that the patient can now rest—there is no constant stirring up for manipulations as required by some methods of treatment, and she can take nourishment from the first. Few patients are nauseated by the morphia when in combination with alcohol. By this method of analgesia I have been able to do many small operations on the pelvic organs, including the opening of Douglas's pouch and drainage in pelvic peritonitis. Dr. A. K. Gordon tells me that at Monsall Hospital he has repeatedly used it for abdominal section and suture of the ruptured intestine in enteric fever. This is by far the boldest of the applications of the morphia-alcohol-cocaine method of analgesia of which I have heard, and it opens up a vista of extensive and beneficent application of it in the future. In regard to the more painful operations one point is worthy of mention. Dr. Alexander Wilson assures me that when it has been necessary to supplement the influence of the morphia and alcohol by a general anæsthetic the amount of chloroform required is remarkably small.

In bringing this subject before you I do not harbour the illusion that I have evolved an epoch-making method of treatment, but my experience has brought with it the conviction that the employment of morphia and alcohol sedation

in properly selected and suitable cases may be made to prevent much mental and physical suffering among a considerable contingent of our obstetrical and gynæcological patients.

Manchester.

HEMIATROPHIA FACIALIS PROGRESSIVA, OR FACIAL HEMIATROPHY.

(PROSOPODISMORPHŒA: APLASIE LAMINEUSE PROGRESSIVE.)

BY J. RUTTER WILLIAMSON, M.D. EDIN.,
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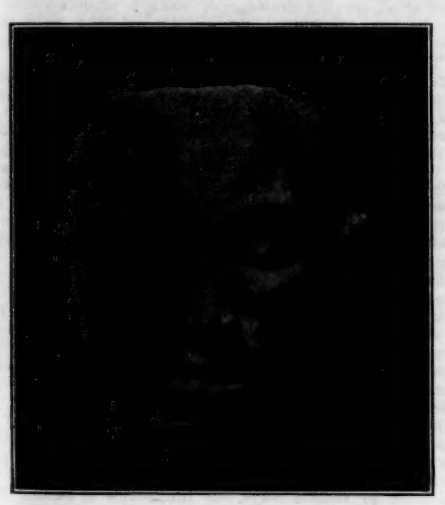
FACIAL hemiatrophy is a disease so comparatively rare that the following marked instance of it is perhaps worthy of record, especially as it presents certain points of difference from those hitherto recorded. I would like to express my indebtedness to Rao Sahib Dajee Ram of Nagpur for very kindly getting the youth, who was his patient, to travel a distance of over 1000 miles in order that a fuller examination of the case might be made. And I am under very great obligations to Mr. E. H. Hamilton, D.D.S., of Poona, for the interest taken in the case and for the skill and patience displayed in securing excellent casts of the patient's face and jaws. Dr. Barbara M. Cunningham, of the Lady Dufferin Hospital, Nagpur, also favoured me on another occasion by taking a cast of his teeth. The patient's medical attendant, Rao Sahib Dajee Ram, tells me he believes that this is the third case which he has seen in his practice, one being as far back as 1878 and the other in 1894.

The patient, a Hindu, aged 17 years, was first seen by me in March, 1907. Ten months previously he had suffered from fever, accompanied by severe headache, which was worse on the left side. The fever continued off and on for several months and was believed to be malarial, though I understand that no blood examination was made to confirm the diagnosis, and that it presented some of the characteristics of an influenza attack. After four months the youth's friends noticed that his left cheek had become thin and a considerable depression above and below the left malar bone was observable. The eyebrow



Reproduction of a photograph of a cast of the patient's face.

next participated in the process and when seen in March, 1907, there was distinct left-sided atrophy of the whole face. In July of the same year this had become still more marked. Contrary to the majority of cases recorded, which so far as I can ascertain number about 100 in all, the skin was not hide-bound nor parchment-like in texture, nor was its colour changed, nor did the eyebrow hairs fall out or lose their pigmentation; and sweating, which is usually diminished on the atrophied side, was in this case notably greater than on the unaffected side of the head. The bones had shared in the atrophy which had affected the skin and subcutaneous tissue and fat, but had apparently spared muscle tissue, as the patient could smile, show his teeth, frown, and masticate quite normally. Photographs of the casts and of his face bring out very well the bone atrophy of the left side and this was confirmed by careful measurements. In the illustration it will be noticed that the thinning of the tissues on the left side produces the impression that the healthy side is encroaching beyond the middle line of the forehead, nose, and chin. The loss of fat and subcutaneous tissue around the orbit gives the left eye a somewhat staring appearance.

The excellent casts made by Dr. Hamilton have been presented to the Museum of the Royal College of Surgeons of England, where they can be seen. The cast of the lower jaw appears by careful calliper measurements to show slight atrophy of the left alveolus, the hollowing below the alveolar margin being a trifle deeper on that side. The teeth themselves, as might be expected in a case occurring at an age when they would be fully formed, are unaffected, though Dr. Hamilton thought that he discerned some tilting of the cusps which might be caused by the alveolar weakening. The smaller cast of the upper jaw was made to demonstrate the greater concavity of the hard palate behind the incisor teeth of the left side. This can best be appreciated by putting the pulp of the middle finger in the hollow first on one side and then on the other. It also is evidently owing to the atrophy of bone and mucous membrane on that side. In this the patient exemplifies another difference from the conditions usually present, for I believe in most, if not all, other recorded cases the hard palate was unaffected.

The nasal cartilages, turbinate bones, and mucous membrane of the left side of the nose have also suffered and the diminution in their size has given a curious empty appearance to the left nostril. Whether the left side of the tongue was reduced in size or not was difficult to determine. On different occasions our impressions varied and if it was affected at any rate the atrophy was not well marked. The left ear was smaller than the right. As in some other cases,[1] atrophy was not confined entirely to the head, for the left clavicle was three millimetres thinner than the right and the hollowing above and below it was somewhat deeper. (There was no chest trouble to account for this.)

The patient's ability to discern familiar scents appeared less acute on the left side and he said that he did not recognise sugar when I placed it on the left half of his tongue. Whether these sensory impressions were really diminished is difficult to be quite sure about, as in persons of this class the intellectual appreciation of such differences is often very imperfect. As a rule such sensations have been unaffected. He complained of frequent neuralgic pains on the left side, especially above and below the orbit. In Romberg's case there was a history of very severe neuralgia which was subsequent to an attack of what was called "facial erysipelas." As far as I could ascertain there does not seem to have been any special skin lesion in this case. The patient did not suffer from any unilateral twitching. His pupils were normal and equal. There was no opportunity to test the electrical response of his muscles, but apparently they are usually only modified to the extent of slight acceleration in reaction of the atrophied side to the galvanic current, owing, doubtless, to a lessened resistance from loss of fat and intermuscular tissue.

A curious feature which, if it had anything to do with the disease, is difficult to explain was that on the left side the soft palate hung much lower than on the right. This is seen to some extent in the photographs, though it was much more marked when the patient was not straining to hold his mouth open as he is in the pictures. The secretion of tears and saliva was unaffected. Cutaneous sensibility was unchanged. The eye on the affected side was normal, though according to Goodhart it is not uncommon for the cornea to ulcerate and the eye to be destroyed.

The skin in some cases has presented distinct sclerodermatous changes which, as in Robinson's case,[2] have not always been confined to the face but have been seen also on the thigh of the same side. In this case the skin seems to possess its natural softness and elasticity and the hair on the left eyebrow and on the left side of the head presented

[1] P. Davidoff, Thesis, Erlangen, 1875; H. Emminghaus, "Ueber Halbseitige Gesichtsatrophie," Deutsches Archiv für Klinische Medicin, 1873, Band xi., S. 96.

[2] American Journal of the Medical Sciences, October, 1878.

no differences in colour or quantity or quality to that of the right side.

This case was like the majority in occurring in a person under 20 years of age, though males are less frequently attacked than females. There was nothing gleaned from the man's antecedents to suggest any hereditary influence.

The causation of the malady is still obscure. Of the five cases which have come to the post-mortem room there is only one, I believe, in which a thoroughly satisfactory examination was undertaken. This was the case reported upon by Mendel and Virchow of a woman, aged 51 years, who for 26 years had suffered from this condition which came on after an attack of "facial erysipelas." A proliferating neuritis from the origin to the termination of the left fifth cranial nerve was found which was most advanced in the second division of the nerve. The difference between the right and left descending roots of the fifth nerves was marked, the left having undergone almost complete degeneration. A similar change was found in the substantia ferruginea, the nucleus of the so-called trophic root of the fifth nerve.[3] According to Hutchinson[4] the disease may be due in some cases to an arrest of development during the period of growth, the arrest being possibly caused by a morphœa of the fifth cranial nerve. In this case, however, the skin presented no change of a sclerodermatous nature. As in other cases treatment of various kinds had proved entirely useless. Obscure though its exact causation is there seems no doubt of it being due to some nerve change.

Occurring as it does in an Indian, this case illustrates once again the absurdity of the oft-repeated statement that among Indians nervous diseases are almost unknown. I have myself seen instances in the past 10 years of almost every form of nervous disease which may be encountered in the out-patient cliniques of any large European hospital for such affections. This instance of a very rare disease adds one more to the list of nervous maladies from which Indians have suffered.

THE TREATMENT OF PULMONARY TUBERCULOSIS BY A POSTURAL METHOD,

ENCOURAGING DRAINAGE OF THE LUNG AND INDUCING ARTIFICIAL HYPERÆMIA OF THE APEX.

BY A. T. TUCKER WISE, M.D. BRUX., M.R.C.S. ENG., L.R.C.P. LOND., DIPLÔME SUISSE.

EXCEPT on the score of expediency I could never understand the manœuvre of placing a man on his back to recover his breathing, but when as a house surgeon many years ago I daily passed an illustrated notice of the Humane Society representing the Silvester method of resuscitation in drowning I came to the conclusion that what appeared to the eye as rather a suffocating, choking attitude was by consent of high authority the proper physiological position for recovery of respiration. Later I perceived that asthmatics could scarcely endure the dorsal decubitus; the worst of them sat in armchairs, leaning forwards and grasping the arms as a *point d'appui*, preferring that seemingly constrained position to that of reclining on the back propped up with pillows; while all the ordinary and extraordinary muscles of respiration were in action to keep up the supply of tidal air to the contracted bronchi.

Apart from the consciousness of oppression to the respiratory movements in the dorsal decubitus when the free entry of air into the lungs is limited or impeded, as in asthma and bronchitis, pneumonia, pleurisy, and pulmonary failure generally, there is no question that gravitation of blood takes place in the dependent parts of the lungs. In surgical cases, kept on their backs for a long period, who have no actual disease whatever except some slight degree of cardiac weakness, hypostatic congestion and œdema of the bases of the lungs under such conditions have been remarked so often that there can be little doubt of the force of gravity being a prominent factor in the production of mechanical congestions.

Some years ago it was proposed to empty foul cavities of the lungs by utilising the force of gravitation and an ingenious revolving chair was constructed with this object in view. The performance was, however, not very popular, and although the principle of inversion was sound its practical adaptability was beset with some inconveniences. As an imperfect substitute simple recourse was had to the morning *toilette des poumons* where the patient leans over the side of the bed for a few minutes and with a minimum coughing effect evacuates the night's collection of muco-purulent matter from his cavities and bronchial tubes. Few patients are sufficiently persevering in these efforts effectively to attain the end in view, and the position of leaning over the bedside is a little twisted and cramped and can be rarely sustained for long. Dr. W. Ewart's method described in THE LANCET in 1901 of treating bronchiectasis by keeping the foot of the bed raised and by partial inversions has proved satisfactory. In children, partial inversion is more easily carried out than in the adult. They usually swallow their phlegm and if the process of expectoration can be assisted by any natural means it is a distinct gain when decomposing toxic excretions are to be got rid of. Although I have for a number of years encouraged patients to perform the *toilette des poumons* either by leaning over the bedside or adopting various other expedients such as the genu-pectoral position and by so doing empty their cavities every now and then, I have felt that these evolutions were insufficient, although producing good results as far as they went, and after repeated experiments in this direction an inclined plane has been evolved. I have devised the lying-out chair with an *allonge* which enables the occupant to assume the *prone* or forward position without discomfort. The special feature of the appliance is that, combined with the *allonge*, it forms for the patient a *double inclined plane*, and by this curvature of the body obviates excessive blood pressure in the cerebral vessels, as the lower extremities of the patient are not raised above the level of the head. In all other previous attempts to invert a patient congestion of the head has proved a great obstacle to maintaining the position for any length of time. As a beginning this inclined plane is employed on three occasions during the day, commencing with half an hour each time. When the patient becomes a little habituated to the novelty and more inured to the unaccustomed slope of the body, some hours may be spent in this position, either waking or sleeping, as in addition to utilising the force of gravitation for the drainage of corrupt accumulations in the lung an important modification of the pulmonary circulation is brought about by the forward incline of the thorax. The apices of the lungs, now in a more dependent situation, have at once a fuller blood-supply and some parts of the pulmonary tissue become relieved from the weight of the heart which falls forward to be supported by the sternum. Perhaps this slight alteration in the relations of the viscera is of less consequence than the increased diffusion of blood which, we may with reason conclude, has supervened in the upper and more confined parts of the lungs. This mechanical plethora will be at its limit some time after the prone position is assumed, when a partial readjustment of the circulation will subsequently ensue influenced by the nervous centres which control the pulmonary vessels, and on the individual rising from the prone position the blood-supply to the lungs and other organs will gradually resume its ordinary condition. This *va et vient* of blood surplusage or recurrent hyperæmia (common to all organs) is, to the deteriorating apex, what takes place in the normal lung under conditions of rest, alternating with healthy plethora caused by vigorous muscular effort.

The bactericidal power of the blood circulating actively in a part has from time to time been demonstrated—in reality it is nature's plan of inflammation for the repair of an injury—and artificial hyperæmia as a remedial measure has been attempted in various ways, but the device of raising the patient's extremities and lowering the upper part of the body has invariably been attended with discomfort or severe headache, as the procedure has been carried out in a posture that could not be maintained with ease.

Other measures have been adopted with the object of inducing hyperæmia in the lung by opposing a resistance to inspiration—breathing through narrow tubes, breathing rarefied air in the pneumatic cabinet—wearing occasionally a celluloid mask slightly to impede inspiration (Kuhn). This latter plan is said to be attended with some success.

Bier's method of inducing localised hyperæmia on the

[3] Neurologisches Centralblatt, 1889, No. 14.
[4] Quoted by Aldren Turner, "Allbutt's System," 1899, vol. vi., p. 488.

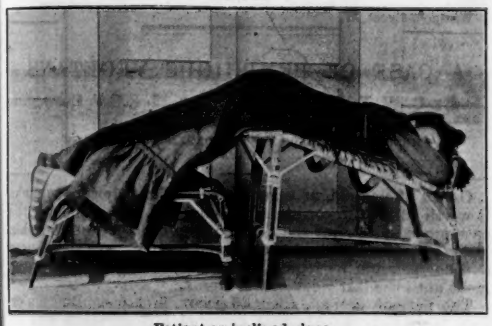
surface of the body for the treatment of boils, abscesses, and suppurating parts has produced good results.

It has long been supposed that anæmia of lung tissue encourages softening and caseation of tuberculous nodules and the susceptibility of the apex has been explained on the ground of impaired circulation of blood and lymph in this narrow part of the lung. This theory gains support from the marked freedom from tuberculous disease in cases of valvular derangements of the heart where the latter are accompanied by pulmonary congestions.

The semi-supine reclining attitude in vogue adopted by votaries of the open-air cure and now universally carried out, where the patient lies on his back propped up with a pillow on a couch or reclining chair is, *of all customary sleeping positions of the body, the most undesirable to further the easy evacuation of sputum from the lungs.* Putting aside the effect on the pulmonary circulation, especially as regards the full blood-supply to the cornered apices, this dorsal or supine slope of the thorax cannot but favour the extension of the disease from the apex of the lung to the back of the lower lobes by unintermitting gravitation. The common line of advance taken by the disease is actually seen to be in this direction. Better that the patient shifts his position from time to time than that any approach to the dorsal decubitus be maintained *for a prolonged period of time.* Even in those subjects who are taking gentle exercise the periods of called-for rest should not be for ever spent on the weary backward incline.

It may be *apropos* here to mention a curious fact not perhaps generally known except to veterinary surgeons and those dealing with animals, that the dorsal position proves so disastrous to herbivorous animals unaccustomed to it that fatal results may ensue if by reason of an accidental circumstance animals are constrained in some way or another

FIG. 1.



Patient on inclined plane.

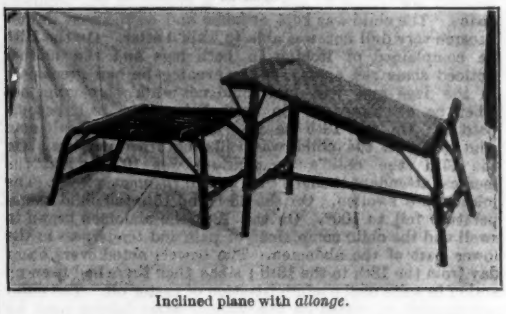
to remain for long on their backs. After some hours horses and cattle will succumb and certain breeds of sheep with flat woolly backs have to be carefully watched, especially when grazing on level land, in order that any animal of the flock which happens to get in the dorsal position may be rendered manual assistance to turn it over or death will result.

In the application of postural treatment as a remedial agent either in early or advanced pulmonary affections some discrimination must of course be made in the selection of suitable cases. Although I now have patients on the inclined plane in whom hæmoptysis has previously occurred I should not hastily place what are termed hæmorrhagic cases in this position without due consideration, nor those with a pronounced pneumonic type of tubercle, nor with fluid in the pleural cavity. It is, however, too soon to be able to state minutely and fully the class of case in which the postural method should be barred or uniformly adopted. It must not, however, be put in use immediately after a meal, as any pressure on the stomach at this moment might give rise to some inconvenience and perhaps interfere with digestion.

It is also a wise precaution not to rise abruptly from the inclined into the upright position or giddiness might result. The best attitude after placing on the *allonge* a cushion for the knees and on the inclined plane a soft rug, is to lie flat on the epigastrium and sternum, with the partial weight of the thorax supported by the arms as in the illustration. (Fig. 1.) This distribution in the weight of the thorax over a wide surface limits respiration only in a slight degree and prevents undue expansion of the damaged pulmonary tissue without embarrassing respiration. During certain phases of the disease this limitation is desirable—chiefly in feverish conditions—but later on, the rest accorded in this way to the lung can be varied with expansion induced by graduated walks, arm movements, breathing exercises, and having recourse to the climatic effects of Alpine elevations.

In Alpine air during winter some patients aver that they feel warmer in the prone attitude and cough less—that the position is by no means uncomfortable after one or two trials—feels like a support to the chest and relieves the occasional dull pains that recur from time to time in a damaged lung.

FIG. 2.



Inclined plane with *allonge*.

I find that large cavities loaded with heavy nummulated secretion are emptied with comparative ease. In some exceptional cases the discharge rolls along the trachea and is ejected without a complete coughing act. It must not be supposed that such a striking effect is to be obtained in ordinary instances where there may be viscid clinging secretion. Here the process of draining the lung will be less marked and will occupy a longer time, but can not infrequently be substantiated by observing the level of apical crepitations which has a tendency to recede after the treatment has been carried out for a short period. In feverish subjects the body temperature appears to be favourably influenced, and with it appetite and nutrition, but a full report of closer clinical observations and the application of the inclined plane in some other affections is reserved for a future communication.

The gratifying results attained in my own practice, by those who have persevered with the method, and the favourable reception given to it by some of my colleagues move me to bring the question of "posture" in the open-air treatment of pulmonary tubercle before the medical profession for further examination. In doing this, and at the same time advocating the prone position for many early cases of pulmonary failure in preference to the dorsal decubitus (which I regard as pernicious if persisted in for long), I do not suggest that all other means employed to combat the disease are to be abated or relinquished. Rest, exercise, diet, and fresh air, sunlight, climate, and personal hygiene generally, and the prudent employment of therapeutic measures will be found just as serviceable in the hands of the practitioner as they have been heretofore.

Bibliography.—Bier: Treatment by Hyperæmia, Journal of Balneology, October, 1907. Colin Campbell: Mechanical Chair to Facilitate the Direct Treatment of Phthisis by the Intra-tracheal Method, Brit. Med. Jour., Dec. 19th, 1903. Walter Carr: On Bronchiectasis in Young Children, Practitioner, vol. xlvi., p. 87, 1891. Arnold Chaplin: The Treatment of Bronchiectasis, Practitioner, December, 1906, p. 734. Ewart: The Treatment of Bronchiectasis by Posture and Respiratory Exercises, THE LANCET, July 13th, 1901, p. 70. Jacobson: Zur Behandlung von Bronchial Erkrankungen durch Lagerung, Berliner Klinische Wochenschrift, Oct. 8th, 1900, p. 904. Kuhn: On Hyperæmia Induced by a Suction Mask, Münchener Medicinische Wochenschrift, 1907. Quincke: On Emptying the Bronchi and Cavities by an Inclined Posture, Berliner Klinische Wochenschrift, June 13th, 1898, p. 525. Stolzenburg: On Kuhn's Suction Mask, Münchener Medicinische Wochenschrift, No. 16, 1907. Also Groeber, Jacoby, Schmieden, and others.

THE UNITED HOSPITALS ATHLETIC CLUB.—This club, which is under the presidency of Sir William Allchin, will hold its forty-second annual sports meeting at the Stamford Bridge-grounds on Wednesday, June 17th, commencing at 2 P.M. Mr. Stanley Hoyte, Westminster Hospital, is the honorary secretary.

A CASE OF ENTERIC INTUSSUSCEPTION.

BY F. DE HAVILLAND HALL, M.D. LOND., F.R.C.P. LOND.,
SENIOR PHYSICIAN TO THE WESTMINSTER HOSPITAL.

A BOY, aged five years and eight months, was admitted into the Westminster Hospital on Jan. 21st, 1908. The mother stated that on the afternoon of Jan. 9th she met the boy at the door of the house as he was returning from school. He complained of pain in the popliteal space of the left leg and he was unable to bend the leg sufficiently to mount the steps into the house. The same evening the mother discovered a swelling of the size of a marble in the popliteal space. The child was kept at home and on the next day he became very dull but was able to walk better. On the 12th he complained of itching in both legs and the mother noticed some red spots. In the evening he had great pain in the legs and feet and could not walk, screaming out when he attempted to do so. The spots had become patches. On the 13th he was seen by a medical man who said that the child was suffering from purpura. On the 14th the child's temperature was 102° F. and the medical attendant thought that he had rheumatic fever. The joints were swollen. On the 15th and 16th the child's temperature fell to 100°. On the 18th the abdomen began to swell and the child complained of pain and tenderness in the lower part of the abdomen. The bowels acted every other day from the 12th to the 18th; since then there had been no action in spite of the administration of castor oil. The child commenced to vomit on the 20th. After taking food he would have severe pain which was partially relieved by vomiting. Vomiting occurred invariably after food but not at other times. There was nothing in the family history or the previous history of the patient to throw any light upon the case.

Soon after admission two enemas were given (three-quarters of a pint of soap and water and three ounces of olive oil). The result on both occasions was hard fæces, but no mucus or jelly-like material. On Jan. 22nd the child looked very ill; there was pallor of the skin and mucous membranes. The tongue was dry; there was a thick whitish-yellow fur, not uniform. The child had vomited several times; the vomit was a thick brown liquid with a distinct fæcal odour. There was general abdominal distension and the child cried out with attacks of pain, but it was difficult to locate tenderness; when asked where the pain was the child pointed to the umbilicus. There was impairment of percussion note below the umbilical level. The respirations were 20 and the pulse was 104 per minute. After admission the temperature ranged between 99·2° and 97°. There were purpuric spots over the lower extremities and to a less extent over the sides of the abdomen.

On Jan. 23rd Mr. W. G. Spencer opened the abdomen and found an enteric intussusception and a piece of intestine gangrenous. He resected the gangrenous portion and did an anastomosis. The child was very collapsed after the operation but rallied after a normal saline injection into the rectum. He was very restless during the night and vomited two or three times a considerable quantity of dark, almost black, liquid material; between these times there was almost continual vomiting of smaller amounts. The child died at 2 A.M. on the 25th. A post-mortem examination was not allowed.

The temptation to publish only cases in which the original diagnosis has been confirmed by the subsequent course of events is doubtless one which appeals to many minds, but I think that everyone will agree that usually more is to be learnt from one's mistakes than from one's successes. On admission the case was regarded as one of Henoch's purpura. In favour of this view was the age of the patient, Henoch's purpura being seen chiefly in children, the presence of a cutaneous lesion of a purpuric character, the history of pain and swelling in the joints, and lastly the abdominal pain and vomiting were regarded as the gastro-intestinal crises characteristic of the disease. As against the diagnosis of Henoch's purpura it must be borne in mind that the vomited matter had a fæcal odour. I can find no reference to this condition of the vomit in the disease under consideration. In Henoch's purpura the vomiting, though often persistent and severe, and frequently bilious and occasionally bloody, is not fæcal. Then, again, in the case before us there was no diarrhœa; the bowels had certainly acted every other day, but the motions passed in the hospital consisted of hard fæces, whereas in Henoch's purpura diarrhœa is common and the fæces frequently contain blood and mucus. In view of the discovery of an enteric intussusception at the operation, at first sight the diagnosis of Henoch's purpura seems to be placed quite out of court, but it may be argued that the intussusception was brought about by the straining resulting from the vomiting associated with the gastro-intestinal crisis of Henoch's purpura.

On looking back over the case I regret that I did not advise an operation when I saw the child on the afternoon of Jan. 22nd, but I was sufficiently anxious about the case to pay an early visit on the following morning, and I then decided that surgical interference was necessary. When I first saw the child neither the pulse, the state of the abdomen, nor his general condition appeared to warrant an exploratory operation.

Dr. B. L. Abrahams, who saw the patient some hours after my visit, came independently to the same conclusion. He writes to me: "When I saw the child at 9.30 P.M. on Jan. 22nd nothing abnormal could be felt in the abdomen, the temperature was about 99°, the pulse 100, full and regular, with no suspicion of 'wiriness.' The child had only vomited four times during the day and it had passed no blood, as is so common in intussusception." The lesson I think to be learnt from this case is that fæcal vomiting is a sign of grave significance, and that symptom being present operative interference should have been undertaken at once. It was unfortunately delayed some hours owing to the belief that the patient was suffering from Henoch's purpura, but the converse should be borne in mind—viz., that a patient suffering from Henoch's purpura may be operated on under the idea that the abdominal symptoms depend upon intestinal obstruction. I have heard that such a mistake has been made but I cannot refer to the record of any case of the kind.

Wimpole-street, W.

A CASE OF PEMPHIGUS VEGETANS.

BY C. W. YOUNG, M.R.C.S. ENG., L.R.C.P. LOND., D.P.H. CAMB.,
HONORARY SURGEON TO THE DARTMOUTH COTTAGE HOSPITAL.

CASES of pemphigus vegetans are sufficiently rare to make it worth while to record the following one, and although the case proved fatal, yet the decided improvement of the skin lesions under a staphylococcic vaccine seems worthy of note and compels me to regret that I did not adopt that treatment until the last week of the illness.

The patient, a man, aged 26 years, first consulted me on Feb. 1st, 1908. In his past personal history there was no record of any previous illness. He was a well-built, intelligent man and was at all times optimistic. He lived with his parents in particularly healthy surroundings, under good conditions of cleanliness, having abundant food, and was unmarried. He was a moderate drinker. On examination I found that all the organs were normal and at this time there was no rise of temperature. The urine had a specific gravity of 1020 and was acid with a slight trace of albumin but no casts. The patient asserted that he felt in very good health and that he experienced no tiredness in walking three miles to see me. He presented the following symptoms. On the buccal surface of the lower lip were two whitish, superficial ulcers, while on the top of the tongue was a smaller one and on the chin there was a herpetic eruption in all stages from vesicle to scab. On the skin over the left umbilical region there was a bright red excoriated surface as large as an egg, with sharply defined edges; this he had been treating with some strong ointment which accounted for the absence of scales. Over the right pectoral region were two smaller and more circular patches similar to the excoriated surface mentioned but with a dark scaly collection in the centre of each, and in the right inguinal region was a collection of six small vesicles without any surrounding inflammation. The patient gave the history that the ulceration of the lower lip had begun about six weeks previously; about a fortnight later the large patch on the abdominal wall had begun as a small watery bleb and subsequently had broken down and spread; the patches on the chest were about two weeks old, those on the chin had commenced a week ago, and the group in the

inguinal region had appeared on that day. The odour of the breath was singularly offensive and later, before he was efficiently dressed by a nurse, the smell from him was like nothing so much as rotting cabbages. I gave him a gargle of carbolic acid, an ointment of boric acid, and a mixture containing three minims of arsenical solution to the dose. On Feb. 3rd the patient again walked in to see me. The vesicles in the groin had meantime become purulent and were now of the size of threepenny-bits. On the 5th the vesicles had broken, the superficial epidermis was peeling off, and they were assuming the appearance of the patch on the abdominal wall. On the 10th the patient sent for me because a blister had appeared on the sole of his left foot which had prevented him from walking. The blister was a large one, covering the whole plantar surface and extending round the inner side to the dorsum. The contents were already purulent. In the right groin the patches had coalesced into one raw red surface as big as the palm of one's hand, with, in the middle of it, a yellow slough of epithelium. The other skin lesions were worse. There were fresh ulcers in the mouth, on the tongue, and on the hard palate. The patient could no longer take anything but fluid nourishment and could not open the mouth wide. Fresh surfaces over the chest were becoming implicated, no longer, however, in herpetic vesicles, but in blebs and blisters. I discontinued the arsenic and administered strychnine, quinine, and iron, and for the mouth gave formamints to suck. By the 24th both feet were involved completely;

the bullæ on the left foot had shown signs of healing in the centre of the sole and a good dry skin had formed on it, but a fresh blister appeared there and the process recommenced. There were now large bullæ over the back, the neck was encircled by one continuous excoriation, and the face presented a scabby surface. The nasal cavity, too, was implicated and the nostrils were choked with bloody scabs. I tried painting the bullæ with tincture of iodine and they showed considerable improvement under it, but it was a painful proceeding when applied to many of them and the new bullæ formed more quickly than the old ones improved. Ointment of carbolic acid was tried on the face and was found so beneficial in preventing scabbing that I used it on the body also, but at the end of some days I was forced to desist by the advent of carboluria. On March 5th, in consultation with Dr. H. W. Webber of Plymouth, I decided to try a vaccine. I made two cultures from the clear fluid in a freshly formed blister and one culture from a drop of pus under one of the thick scabs, and sent them to Dr. W. L. Pethybridge. He reported that no growth occurred with the blister fluid but that the pus culture showed growths of staphylococcus albus and aureus, and from this he prepared a vaccine for me. On the 12th I injected hypodermically a half cubic centimetre of vaccine containing 500 million cocci. On the 17th there was marked local improvement. Both feet were practically healed, the scabs everywhere seemed to come off more easily, and the red excoriations appeared paler and drier. The patient was, however, very weak and the pulse was rapid and feeble. I injected a further half cubic centimetre of the vaccine. On the 19th the patient vomited about a pint of "black vomit" and he died shortly afterwards. A necropsy was not obtained.

A point that strikes me as noteworthy is that for the first six weeks the disease made comparatively little progress and the general health of the patient was apparently unaffected, but from that time onwards it developed with irresistible rapidity; and consequently it seemed to me that had some active measures been adopted within the first few weeks to cure the condition in the mouth it is likely enough that the later condition of pemphigus vegetans would not have developed at all. The fact that no growth occurred in two cultures taken from the contents of a fresh blister suggests that the exudation into the superficial epithelium may be due to a toxin. The resulting raw surface undoubtedly affords a suitable nidus for staphylococcus albus and aureus and the subsequent absorption of their toxins might possibly account for the cumulative force of the disease in a subject with small resisting power to these cocci. I saw nothing in this case which would support the claim of a nervous origin of the disease.

Dartmouth.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF ACUTE AND TRANSITORY DILATATION OF THE HEART IN AN INFANT.

BY E. LLOYD JONES, M.D. CANTAB.,
ASSISTANT PHYSICIAN TO ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

THIS case, of which brief notes are appended, seems to me to be of sufficient interest to merit publication.

I was called to see an infant, aged 15 hours, and found that there was marked tonic spasm involving the respiratory muscles which were so rigidly contracted that spontaneous expiration did not take place; now and then there were some clonic spasms. The little patient was deeply cyanosed. I sent for some chloroform and meanwhile, keeping the head extended, began to compress the chest, inspiration always following owing to the tonic spasm of the inspiratory muscles. By this method the intense cyanosis was lessened, and meanwhile I examined the heart. The deep dulness was normal in extent and there was no murmur. About an hour or so later, before the arrival of the chloroform, the spastic condition was so intense that respiration was practically at an end in spite of my efforts. On re-examining the heart, to my great surprise I found that the cardiac dulness was almost double its former breadth, extending about an *equal distance from the middle line* on each side, while a loud systolic murmur was audible over the whole front of the chest, most marked over the pulmonary area. Had I known nothing of the case I should have diagnosed a patent foramen ovale with a pulmonary stenosis of congenital origin; but half an hour, or an hour previously, no cardiac lesion was found, so that I concluded that the obstruction to respiration had induced some unusual condition of cardiac circulation.

While making these observations I was still resorting to my original plan of extending the head and squeezing the chest rhythmically to replace normal expiration. When chloroform arrived I gave it in sufficient quantity until all spasm had ceased. The child rapidly regained his normal colour. Re-examining the heart after the re-establishment of respiration I found that the cardiac dulness had resumed its normal size and that the loud murmur had quite disappeared. On the whole I am inclined to think that the signs were attributable to extreme dilatation of the right auricle and ventricle causing regurgitation through the tricuspid valve, and possibly there was a leak through the foramen ovale which, of course, is patent in an infant of 15 hours of age. One knows that "functional" regurgitation through the tricuspid and the mitral valve occurs in

adults, but in this case the loudness of the murmur over the pulmonary area suggested a leak through the foramen ovale.

I may add that the infant, weighing 10¼ pounds, was born with difficulty and the mother was delivered with forceps. The head had been much compressed. It is pleasant to add that the child is now more than eight months old and that he is perfectly well.

Cambridge.

NOTE ON A CASE WHERE A PIECE OF STRING TIED ROUND THE PENIS CAUSED STRANGULATION AND GANGRENE.

BY J. W. CLEVELAND, M.R.C.S. ENG., L.R.C.P. LOND.

THE patient was a well-developed boy, aged 12 years, with the following history. All his life he had suffered from incontinence of urine and of fæces. He had never been under medical treatment for the complaint. At school the boy was shunned and was a constant butt for the ridicule of the other boys and even the masters. He stated that a boy told him to tie a string round his penis. This advice he carried out about midday on June 19th, 1907, using a piece of twine and tying it about one inch from the pubes. He said that next day he was able to pass a little urine, the string being still in place at the time and causing him a little pain and discomfort. On the 21st the pain was severe and became gradually worse during the day, but in spite of it he went to school as usual and told no one of what he had done nor of the pain from which he was suffering. After school he walked home with great difficulty. His father who was with him noticed that the boy seemed in pain and questioned him. The boy denied having any pain or trouble in walking and the father took no further notice of the matter. At about 8 P.M. on that night, whilst the boy was in his bath, his mother noticed that his penis was "black and swollen." On being pressed the boy admitted that he had tied a piece of string round his penis two days previously. At 9 A.M. on the 30th I was sent for. I went at once and found the boy in bed lying on his back. He was pale; the pulse was 115 and of good volume. He looked tired and rather haggard as if he had been in severe pain for some time. He said that he had little pain then, but the pain had been very bad all night up to an hour or so previously to my seeing him when it became suddenly very much easier. He localised the pain to the vesical region and to the penis. On examination the bed was all wet, presumably with urine, and I found the following local conditions. About one inch from the pubes the penis was divided into two parts by a deep groove extending around its whole circumference. The skin was divided and the appearance was consistent with a tight string having sloughed through the parts. From the urethral portion of the penis urine was escaping. From this point to the meatus the whole organ was engorged and of a blackish-grey colour; the skin over it was peeling in places. No distinction could be made between the glans and the body of the penis. The engorged portion was quite cold. I was unable to find any trace of the string, so I made several snips with the scissors where I thought the string might possibly be imbedded. There was some tenderness over the bladder. Owing to the father's absence a delay of three hours occurred before getting consent to an operation.

Operation.—Mr. C. D. Nuttall, who saw the case with me, kindly gave chloroform. On examining I found that the string had sloughed deeper into the urethral portion than the dorsal side of the penis. The urethra was completely divided. The string could not be found. I attempted to pass a soft catheter through the meatus but the tissues were so soft and friable that it was impossible. The skin peeled off on the slightest manipulation. I made an incision into the dorsal surface and found the tissues engorged with black blood which was becoming purulent. I amputated the gangrenous portion by a circular incision at the groove where the string had presumably been tied. A soft catheter was then passed into the bladder and tied in position.

The boy made a good recovery; a considerable amount of contraction took place at the cut edge of the urethra, dilatation under an anæsthetic being required. For two and a half months he passed a No. 8 metal sound twice a day. He now (April, 1908) passes the sound occasionally, the new meatus and surrounding tissues are soundly healed, and the boy is able to pass urine quite naturally.

The case must, I think, be a rare one, and considering the acute pain the boy must have suffered it is remarkable that he was able to bear it and to be at school for a whole day without giving way. I think there can be no doubt that he tied the string only moderately tightly, causing a slight and slow congestion at first, which, gradually increasing, tightened the string, finally causing complete strangulation. The acute pain was no doubt relieved on rupture of the urethra, with relief to the distended bladder. It is also of interest to note that for two months after the injury the incontinence of urine and fæces was cured. The trouble then recurred but only to a slight extent, and at the present time the boy states that it only occurs occasionally at night.

URÆMIC DYSPNŒA IN A CHILD, AGED 21 MONTHS.

BY J. C. MUIR, M.D. CANTAB., M.R.C.S. ENG., L.R.C.P. LOND.,
MEDICAL SUPERINTENDENT OF ST. GEORGE'S UNION INFIRMARY, CHELSEA.

A MODERATELY nourished, rickety infant, aged 21 months, had been under treatment for three months for cough, diarrhœa, and occasional slight pyrexia. There was also rectal prolapse, which, if its significance had been grasped, might have led to the detection of the true nature of the case. As it was, the case was regarded as one probably of tuberculosis. On Nov. 16th, 1907, the temperature rose to 101·4° F., the face was pale and pinched, and there was marked dyspnœa. The respirations were 60 and the pulse was 156 per minute. The interesting feature of the case was the peculiar nature of the dyspnœa, and this furnishes my reason for publishing it. One instinctively felt on looking at the child that it was not suffering, as might readily have been supposed, from an ordinary acute pulmonary lesion. When analysed the peculiarity was found to be that the respirations were unusually full and deep, especially for a child. There was also a slight stridulous sound, though there was obviously no laryngeal obstruction and the voice and cough were clear. Examination was easy but nothing abnormal could be detected in the lungs. The condition plainly suggested that there was interference with the respiratory centre and it was thought possible that the symptoms might be those of an aberrant type of tuberculous meningitis. The child was quite conscious and there were no convulsions or other cerebral symptoms. Death occurred within 48 hours.

At the post-mortem examination the brain and heart were found to be normal, as also were the lungs, except a few small areas of collapse. The liver and spleen were enlarged, but otherwise were not obviously abnormal. There was very slight ascites, the peritoneum and alimentary tract being otherwise normal. The bladder contained a calculus nearly one inch in length, oval in shape, the outer part phosphatic, with a small core of uric acid. The ureters and renal pelves were dilated and contained thin pus, as also did the bladder.

There were never any urinary symptoms in the case and the urine, being always passed into the napkin, had never been obtained. The prolapse had been thought to be sufficiently explained by the cough, diarrhœa, and abdominal fulness. After the failure in diagnosis the interest of the case lies in the type of dyspnœa. Taking the clinical and post-mortem features together, I think it can scarcely be doubted that it was caused by a toxic action on the respiratory centre, due to inadequate renal secretion, the more so as the type of dyspnœa was recognised as central without any suspicion of the urinary disease. While uræmic dyspnœa is, of course, quite common in adults, I think it must be very rarely seen in so young a child.

Fulham-road, S.W.

THE MEDICAL INSPECTION OF SCHOOL CHILDREN IN LIVERPOOL.—At a recent meeting of the city council of Liverpool the subject of the appointment of a medical officer for the inspection of children attending the elementary schools led to a protracted debate. The education committee desired that whoever was appointed should have control, with Dr. E. W. Hope (the medical officer of health) as consulting medical officer. An amendment to the effect that supervision should be exercised by Dr. Hope on the ground that dual control was inadvisable was carried by a large majority. Subsequently it was decided to advertise for an inspecting medical officer at a salary of £300 a year.

Medical Societies.

HUNTERIAN SOCIETY.

Discussion upon Rheumatism.

A MEETING of this society was held on May 6th, Mr. F. ROWLAND HUMPHREYS, the President, being in the chair.

The debate on Rheumatism was resumed by Dr. G. OLIVER (Harrogate) who dealt with the pathology and balneo-therapy of rheumatism. He said that the cases of so-called rheumatism commonly met with at mineral spas were a heterogeneous group of painful somatic affections when viewed from a diagnostic standpoint. Rheumatic gout was always present at spas. Sometimes there were cases constituting a chronic residuum of an acute arthritis, probably infective. 99 per cent. of the cases had stiffening and deforming affections of the joints, tendons, and fascia, with localised neuritis. What Sir Thomas Watson wrote 50 years ago was probably true to-day—viz., that rheumatism was an inflammation of the fibrous tissue, and it was merely necessary to add to it our conceptions as to auto intoxication and infectivity. As to the immediate cause of fibrositis, apart from the invasion of the organisms of rheumatism, he drew attention to the important rôle played by the tissue lymph circulation in the causation of gouty and rheumatic fibrositis. In the fibrous tissue lay the meshwork of the capillaries and lymphatics and nerve terminals. In gout there was a reduction in the physical interchange of lymph, the chief reduction being in the area of the fibrositis. He believed that lymph stagnation favoured the deposition of salts and less soluble materials in the lacunæ of the cellular and fibrous tissue. He thought a diffused precipitate was the cause of the fibrositis and the fibrous proliferation. Cold and damp, especially when combined, were well recognised causal factors of chronic rheumatism, and humidity aggravated the condition. Professor William Thompson had shown that when damp air was breathed less carbonic acid was exhaled than when the air was dry. Bence Jones regarded rheumatism as a suboxidation disease and it was well known that pain and neuritis were frequent in diabetes. In discussing treatment he emphasised the importance of heat and movement, supplemented by massage and electricity and chemical baths. The benefit derived from baths was often enhanced by saline aperient waters internally, with bi-weekly irrigation of the colon with warm saline water.

Dr. R. FORTESCUE FOX dealt with the various conditions popularly known as chronic rheumatism. He insisted on the necessity of placing each case in its proper category, as success in treatment largely depended on accuracy of diagnosis. People suffering from the results of acute rheumatism should take a course of mineral waters as a routine, as they would do much to prevent relapses and contractions. Warm baths and douches should also be used. Arthritis deformans might be known by its insidious onset in debilitated subjects; it was often not recognised until it had become practically incurable. It should never be treated by spa courses but by dry air and sunlight, with perhaps cold salt douches—a tonic and supporting regimen. The typical arthritis of middle age was usually a far more amenable condition and balneological treatment would give the best possible results. The arthritis of the aged was generally far more limited in site and was often an expression of general decay. The failing circulation and nutrition should be assisted as far as possible by carefully chosen supporting diet and he thought that a long course of thermal and subthermal baths, with or without massage, had a markedly restorative effect. Sedative air, such as that on the north-east coast of Scotland, was beneficial in all senile affections. In the treatment of arthritis deformans he insisted on the need of a prolonged after-cure. A much rarer condition was arthritis ossificans, which was perhaps well treated by hot thermal remedies. Gonorrhœal arthritis was far too often overlooked and the urethral condition should be put right. A rare but interesting condition was septic arthritis, which often began acutely in young subjects without cardiac affections, with irregular pyrexia and blotchy eruptions. Brine baths, such as those of Droitwich, seemed effectual in such cases. Possibly the arthritis might be found to be tuberculous in nature but that was comparatively uncommon. Wherever there was a possibility of a gouty element in a case full trial should be given to saline, sulphur, or alkaline baths.

Dr. LEONARD G. GUTHRIE dealt with rheumatism in childhood. He thought that sore throat in rheumatism was coincidental but was predisposed to by a condition of lowered health which favoured the activity of the rheumatic virus. Erythema nodosum he did not regard as rheumatic, nor did purpura rheumatica seem to be specific. Epistaxis was a common early sign in rheumatic children and it might be associated with articular trouble. Rheumatic nodules were undoubtedly rheumatic but they were not necessarily of fatal omen, though he had never seen them except in association with endo-, peri-, or myo-carditis; they were evidence of an active toxæmic process. Articular rheumatism was exceedingly rare in children under five years of age. In children under three years of age cardiac signs were due to congenital malformations as a rule, and when choreiform movements occurred under three years of age they were more frequently due to gross cerebral disease than to rheumatism. Any evidence of cardiac implication in a child suffering from rheumatism should be treated at once by rest in bed for at least three weeks. Rest did not avert the danger of endocarditis, but a child allowed to go about in that condition was far more liable to be rendered incurable than one which was under proper treatment. Salicylates, including aspirin, relieved pain, but he did not think they prevented cardiac complications. Some thought that giving sodium carbonate in combination with salicylates prevented ill-results, but with that he did not agree. The treatment of rheumatism in children was the treatment of the heart trouble. Digitalis was useless when myocarditis was present. When distension of the right heart occurred digitalis combined with squill and mercury was of great value, but it should be preceded by leeching or dry-cupping. He believed that the relief of pain was due to the effusion of fluid which prevented the pericardial surfaces rubbing together. The employment of the ice-bag, as recommended by Dr. Lees, was useful; but when there were much pain and restlessness morphine was the only drug which could be given with good effect. Chorea, he believed, was a rheumatic outcome in neurotic children. The movements of chorea he regarded as due to an uncontrollable impulse to perform several actions. Arsenic, in his experience, had never done any good, no matter how it had been given, but he had frequently known it do harm. He admitted that the movements in the acute stage had often ceased under its use, but they would also cease spontaneously or under any other form of treatment. He admitted that some children tolerated arsenic, and he supposed that in such cases the drug was not absorbed. Among sedatives and hypnotics he preferred chloral and bromides to any other. Some said that chloral caused mania in chorea but mania occurred without the use of that drug. Bromides alone he did not consider very serviceable. Salicylates and aspirin he had found useful when pain was present.

Dr. ARTHUR T. DAVIES referred to the relation of acute rheumatism to life insurance. He divided cases with a history of acute rheumatism into those with a family history of acute rheumatism and those without. The former he would look upon somewhat askance and put upon the limited payment principle. Very few claims in his office had emerged as due to heart disease following acute rheumatism. People in the lower classes were much more liable to recurrent attacks of rheumatic fever than those in a better position. Salicylates reduced the pain and fever but they had not reduced cardiac lesions. Blisters applied around the joints seemed to have a tendency to prevent endocarditis, as his father had maintained.

The PRESIDENT read a letter from Dr. T. J. Horder justifying his use of the term malignant endocarditis at the last meeting. His view was that when the endocarditis took on the ulcerating or fungating form the micro-organism was isolated from the patient and another chapter was opened, the organism having no causal connexion with acute rheumatism.

Dr. FREDERICK TAYLOR, in reply, said that he had hoped to hear some definite decision on the question of the bacteriology of acute rheumatism but there was great difference of opinion. He admitted that the term malignant endocarditis had to be defended. A term was needed to express the fact that the endocarditis was something beyond its immediate locality. A name was wanted for the general condition with endocarditis as the qualifying epithet. Sir Samuel Wilks's term, arterial pyæmia, would be a better name, or endocarditic septicæmia. He considered fibrositis an ugly and unsatisfying term for the chronic condition. In dealing with patients it would be well to retain the term rheumatism until a better one was found. He fully recognised the value

of baths, but there was need of some cure which would prevent the necessity of resorting to baths. There seemed to be no evidence that heart disease had been less frequent during the last 30 years in consequence of the abundant use of salicylates.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

The Rôle of Filaria in the Production of Disease.—The Use of Quinine During Pregnancy, Labour, and the Puerperium.

A MEETING of this society was held on May 15th, Sir PATRICK MANSON, K.C.M.G., the President, being in the chair.

The PRESIDENT said that Dr. W. T. Prout in his paper on the Rôle of Filaria in the Production of Disease (reported in THE LANCET, March 28th, 1908, p. 938) had given the arguments against the filarial origin of tropical elephantiasis and elephantoid disease, but he had stated only two of the arguments in favour of this hypothesis—namely, that founded on general geographical distribution and that on the lymphatic location of the filaria. As Dr. Prout put the case these points were quite inadequate to establish the hypothesis. In discussing this subject they must be careful to discriminate between the tropical and the non-tropical forms of these diseases, for although their immediate cause was the same in all climates—namely, lymphatic obstruction—the agencies which led to this obstruction were various, probably just as various as those which led to ordinary dropsy. Elephantiasis and elephantoid disease were specially prevalent in the tropics. They claimed, as the explanation of this circumstance, that they were specially prevalent there because in the tropics in the vast majority of instances the lymphatic obstruction was brought about by that common tropical parasite filaria Bancrofti. And they claimed to have practically proved this in the case of the elephantoid diseases—by elephantoid diseases he meant varicose groin glands, lymph scrotum, chyluria and lymphatic varix generally—and all but proved it for true elephantiasis Arabum. The proofs which they relied on mainly were threefold—epidemiological, clinical, and post mortem. As regards the first, the epidemiological, or rather the endemical, it included, as Dr. Prout conceded, the general geographical distribution of disease and parasite. But they went further than that in applying the epidemiological test: they claimed more than general geographical distribution. They claimed that the particular local distribution, the proportionate geographical distribution, and further, as Daniels and Low had shown in the case of British Guiana, the racial distributions of disease and parasite corresponded. Dr. Prout conceded the lymphatic habitat of the parasite. That was something. But he did not mention that the adult filaria had been frequently found, and that its young were nearly always found, in the particular lymphatic fields affected as well as in the blood in certain types of elephantoid disease. Thus in chyluria the embryo filaria could be found in the urine in five cases out of six; the same was true of the discharge in lymph scrotum and of the contents of varicose groin glands. He could vouch for that from a large personal experience. Moreover, in these cases the parent worms themselves had frequently been found in the affected tissues. The relationship to the parasite was most intimate. Did Dr. Prout regard this as accidental or would he explain it by asserting that the diseased tissues attracted the worms as a dunghill did sparrows? If so, how did he explain the well-established fact that in a community in which the filaria occurred in 9 per cent. only of the general population it was present in 80 or 90 per cent. of the subjects of chyluria, lymph scrotum, or varicose groin glands? Dr. Prout might retort that it was absent in a proportion of these cases and that if it be the cause of these diseases why was it not to be found in all cases? Their reply was that in all cases it had been present at one time but that after producing the lesion in the lymphatics which eventuated in the disease from some cause or other it had died. Now, as a matter of fact, on more than one occasion he had been, so to speak, present at the death of the filaria and had watched the disappearance of its young from the circulation. Those who opposed the filarial origin of endemic chyluria, lymph scrotum, and varicose groin glands had to explain how it was that in the vast majority of these cases microfilariæ could be readily demonstrated in the blood and characteristic fluids and in many cases the adult worm in the lymphatic vessels, and those who opposed the doctrine of the uniformity of the cause of these three conditions—as Dr. Prout asserted that Osler did—had to explain the frequency with which they concurred and followed each other, as had now been shown in quite a number of published instances. He was sometimes tempted to think that those who criticised and opposed this view of the pathology of chyluria had not studied the cases to which he referred. It was true that the exact *modus operandi* of the parasite had yet to be explained, but that it did give rise to lymphatic varix to his mind did not admit of the slightest doubt. But as regards tropical elephantiasis he admitted that the case for the filaria had not been so completely and convincingly made out. As regards the epidemiological evidence it was just as complete as for the filarial origin of these other conditions but, owing to the general absence of the microfilaria in the blood in elephantiasis, the clinical evidence at first sight seemed to be extremely defective. Nevertheless, if they considered the matter properly, that deficiency could be accounted for; indeed, it seemed to be inevitable, almost, one might say, essential, for the establishment of the hypothesis. Apart from that a certain amount of clinical evidence was forthcoming. Thus cases had been published in which genuine elephantiasis of the scrotum had supervened on lymph scrotum and in which elephantiasis of the leg had supervened on the removal of lymph scrotum, and also in which elephantiasis had concurred with lymph scrotum in the same individual, and also in which one member of a family had lymph scrotum and another elephantiasis of the leg. Surely those concurrences were not accidental. Was it not infinitely more probable that they were the effects of the same cause? And if it be conceded that in the cases of the diseases characterised by lymphatic varix the filaria was the cause then the filaria must be the cause of tropical elephantiasis. Besides that argument another just as cogent might be urged. He confessed, however, that the data on which it was founded were not so extensive as he could wish. In a series of examinations of blood from natives of Cochin he found that the percentage of filaria-infected individuals was markedly greater in those who had no elephantiasis than those who had. Dr. G. C. Low had made a similar observation in the West Indies. That at first sight would seem to militate against the view that the filaria was the cause of elephantiasis, but if they thought of it it was on the contrary a strong argument in favour of that hypothesis. He had already shown that the filaria sometimes died out and that a cause of its death was lymphangitis. Now in almost every case of elephantiasis lymphangitis was an early and frequently recurring feature, and therefore the filariæ, at all events those in the affected lymphatic area, had a poor chance of survival. That, he believed, was one reason for the absence of microfilariæ in the blood in tropical elephantiasis. There might be other reasons, as, for example, that which he had conjectured, the plugging of the lymph channels by the ova of aborting worms. That he had seen on more than one occasion and, indeed, it might well be the first step in starting in some instances the lymph stasis which, on the supervention of a bacterium, induced lymphangitis, ending in true elephantiasis. Dr. Prout apparently did not admit that argument. He pointed to the elaborate and extensive anastomosis of the lymphatic system. Why, he would ask, was that anastomosis so elaborate and extensive? It was because it was necessary. If part of it were obstructed the affected area was by so much imperfectly drained. If they considered the hundreds of thousands of ova in the uterus of a filaria it was evident that there were emboli sufficient in one worm to plug a great many, if not all, of the afferent lymphatic capillaries in any limb or two limbs. Dr. Prout spoke of applying Koch's tests for the validity of the claims of the filaria. Such tests were for many reasons inapplicable. They were dealing with a metazoal parasite and not with a bacterium, with a parasite which produced disease only occasionally, only indirectly, and only, so to speak, by accident. Koch's tests were not for such. Elephantiasis and the elephantoid diseases were the sequelæ rather of a long antecedent germ infection and not the necessary effects of such an infection. They stood in the same relation to the original cause that dropsy did to the germ of rheumatic fever or of stricture of the urethra to the

gonococcus, and to these no one would consider Koch's postulates as applicable. He should have liked to hear more in detail of Dr. Prout's personally ascertained data on the strength of which he appeared to reject the filarial etiology of elephantiasis and the elephantoid diseases. Formerly the filarial doctrine of elephantiasis was, he considered, too readily accepted; now it seemed to him, it was too readily put aside. He confessed as regards tropical elephantiasis Arabum the evidence for the theory was not complete or absolutely convincing, but it was such as to make the filarial doctrine of these diseases far and away the most plausible. For the elephantoid diseases, as he had said, it was conclusive. For many years he had been waiting for some tropical pathologist to take the subject up again. It was a very important one, both theoretically and practically, and he could assure those who would seriously work at it at first hand a most interesting and fascinating study.—Dr. LOW disagreed with Dr. Prout's view that filaria nocturna was compatible with health. In his (Dr. Low's) opinion the filaria was one of the causes of elephantiasis.—Mr. J. CANTLIE contended that there was some reason for surgical interference in elephantiasis with the idea of curing the disease.—Fleet-Surgeon P. W. BASSETT-SMITH, R.N., discussed the question from the point of view of diagnosis between elephantiasis and syphilis.—Dr. W. CARNEGIE BROWN emphasised the necessity for differentiating between elephantoid disease and elephantiasis. There seemed to be strong *primâ facie* evidence that filaria was accountable for elephantiasis, but he did not think it could be definitely accepted as proved.—Sir R. HAVELOCK CHARLES thought that the conditions were associated but had no necessary relationship.

Dr. J. PRESTON MAXWELL read a paper on the Use of Quinine during Pregnancy, Labour, and the Puerperium. In regard to the action of the drug on the pregnant uterus of a healthy woman he said that in small doses it undoubtedly strengthened the slight uterine contractions normally present and caused them to become perceptible to the mother. In larger doses it tended to cause these to become prolonged and painful. Five grains of a good brand of quinine bisulphate were given to a patient on an empty stomach on going to bed. An hour after the uterus was firmly contracted and painful, this condition gradually passing off. In fact, contrary to the view that had been expressed by some writers, it appeared to act very much like a small dose of ergot. On no occasion had the drug appeared to initiate regular uterine contraction. But in the view of these observations, while Dr. Maxwell did not hesitate to give quinine to pregnant patients who had not got malaria, yet he gave it along with food in small doses thrice a day and thereby obviated the unpleasant feeling caused by the strengthening of the uterine contractions. It might be laid down as an almost invariable rule that if in a pregnant woman suffering from malarial fever uterine action had begun, the quinine would probably hasten the abortion, but that if uterine action had not begun it would not start it, but would, on the contrary, probably be the means of saving the pregnancy. Dr. Maxwell's experience of the effect of quinine administered during labour fully bore out what had been stated by several authors, that by its administration not only were the uterine contractions made stronger, but they were prolonged, whilst at the same time their intermittency was preserved. Whether an excessive dose of quinine would not act like a dose of ergot and produce a tonic contraction was in his opinion doubtful. In medicinal doses the contractions, though prolonged, were not truly tonic and undoubtedly helped on labour. With regard to the administration of quinine during the puerperium it appeared to prolong the duration of "lochia cruenta." The shock of a prolonged or difficult labour was very liable to bring on an attack of malaria caused by the malignant tertian parasite which many of these patients kept stored away for appropriate occasions. The temperature might closely simulate that of a septic case, and although the presence of the parasite might enable the medical adviser to say that the patient had malarial fever, it did not exclude the possibility of sepsis. In these cases it was sometimes difficult to obtain mastery over the fever, and for that reason, despite the pain that might be caused, it was probably better that those who were the subjects of chronic malarial infection should have some efficient doses of quinine during the first two days of the puerperium.—The paper was discussed by Dr. W. HARTIGAN, Dr. F. M. SANDWITH, Dr. C. F. HARFORD, and the PRESIDENT, and Dr. MAXWELL replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

Registration of Diseases in Hospitals.—Vital Statistics of the Aged.

A MEETING of this section was held on May 1st, Dr. W. R. DAWSON, the President, being in the chair.

Mr. RICHARD F. TOBIN read a paper entitled "A Plea for Uniformity in the Registration of Diseases in Hospitals," an abstract of which has already appeared in THE LANCET of May 23rd, p. 1499.—Dr. T. P. C. KIRKPATRICK said that an important feature of a classification was that it should be a general one, enabling the returns of one hospital to be compared with those of another. Under present arrangements such a thing was impossible. Objection might be taken to the classification in the "Nomenclature of Diseases." The Royal Army Medical Corps was compelled to make its returns in accordance with the "Nomenclature," and if a disease was returned which was not in that work the return was sent back to be made out according to the books. This he had heard complained against, as some diseases were not mentioned in the "Nomenclature," while others were put down under more or less obsolete names. The method, however, was one that could be universally adopted. The difficulty would occur not so much with hospital registrars as with the terms in which the diagnosis would be put down when the patient was discharged. Different names would be used in the diagnosis of the same disease, and there were diseases which were not easy to put in any class. Besides, it was impossible to expect that hospital physicians and surgeons, when diagnosing, would turn up the book to find a number. They would enter the name of the disease and leave the classifying to the registrar, and difficulty would arise with omissions or differences in the nomenclature. It seemed to him a great pity that although there were in Dublin a number of hospitals they had no hospital statistics of any great value from the Dublin school. Early in the last century an effort was made to publish a joint hospitals report, but after five years it lapsed. In 1845 an effort was made to start a *Dublin Hospital Gazette*: it continued for about two years. It was started again in the "sixties" and lapsed in the "seventies." In 1878 it was started once more, but only continued a short time. While heartily welcoming it he thought that the plan suggested by Mr. Tobin would require some modification which might be brought about by a meeting of the registrars of Dublin hospitals.—The PRESIDENT said that any system which could be universally adopted would produce better results than the haphazard classifications which had been in vogue.

Mr. EDWARD LEDWICH read a paper on the Vital Statistics of the Old Men's Asylum, Dublin. He stated that in the 20 years during which he had been physician to the institution 98 old men had been under his care. Of these, 71 had died, 22 were still living, and five had resigned. Of the total number who died five lived to be over 90 years of age and one to be over 100. The records of death only dealt with 65 cases, because in six cases the notes had been lost. In these 65 cases senile degenerations accounted for 24·6 per cent. of the deaths, while lung diseases were responsible for 15·3 per cent. and apoplexy for 9·2 per cent., an interesting feature of the statistics being that there were only three cases of malignant disease and four cases of enlarged prostate. Another feature of interest was that in the summer of 1891 there occurred an epidemic of contagious skin disease resembling pityriasis rubra; eight of the inmates and three female servants were attacked. A similar epidemic took place at the same time in the Paddington and Marylebone Infirmaries in London. He then referred to longevity and showed a table in which he had recorded the ages, ages of parents, and, where possible, of the grandparents of 37 of the old men. This table also showed their past habits as to alcohol, tobacco, and exercise, and the state of their hearts and blood-vessels. He was forced to the conclusion that heredity had more to do with longevity than had habits, as nearly all

of the men who had lived to a great age could show long-lived parents, while many of them had been addicted to the use of alcohol and tobacco in immoderate quantities. In the asylum they had meat once a day, but no alcohol; he had never found any harm from the sudden stoppage of alcohol.—Dr. KIRKPATRICK remarked on the fact that so few had died from malignant disease, a fact which was of very considerable importance in view of statements which had been made as to the increase of malignant disease in the country. They had been taught that malignant disease was essentially a disease of the latter half of life; but the majority of patients whom they now saw with malignant disease were probably under 50 years of age.

SECTION OF PATHOLOGY.

Exhibition of Specimens.—Spinal Abnormality.—Pathological Report of the Rotunda Hospital.

A MEETING of this section was held on May 8th, Dr. A. R. PARSONS, the President, being in the chair.

Dr. F. C. PURSER showed specimens obtained from a man who had been under the care of Dr. R. Travers Smith suffering from Hodgkin's Disease. The glandular enlargement had been general, the tonsillar enlargement having led to very urgent symptoms of asphyxia. The blood count had shown generally 2,500,000 red cells and from 12,000 to 21,000 white cells per cubic millimetre with a high proportion (from 41 to 88 per cent.) of lymphocytes. The latest count, made a fortnight before death, showed 12,500 white cells per cubic millimetre, 41 per cent. being lymphocytes. The case was further interesting in that he was first seen five years ago with typical primary and secondary syphilitic lesions and there was a most definite history of the same symptoms 27 years previously. At the time of his death the patient was 53 years old. The pleural cavities and abdomen were full of fluid and he suffered from extreme dyspnœa. The right lung was partly collapsed; both lungs were œdematous. The pleuræ were extensively infiltrated with lymphoid cells. There was no infiltration of the lung parenchyma. The heart was a marked example of brown atrophy. The liver on the surface was almost typical of atrophic cirrhosis, though no interstitial inflammation could be detected on section. The spleen was three times its normal size and soft, but not otherwise remarkable. Though no lymphatic glands had been found enlarged in the thorax the abdominal aorta was sheathed several layers deep in lymphatic glands which had lost all typical structure and were in many cases welded together; into some of them hæmorrhage had occurred. One nearly occluded the portal vein and explained the ascites which had been latterly a very urgent symptom. No organ had undergone fatty or amyloid change.—Dr. TRAVERS SMITH said the case was interesting as being that of a man who had acquired syphilis on two occasions with an interval of 27 years. The first attack was unquestionably genuine syphilis, because after it the patient suffered from a condition of partial blindness, which Dr. Joyce considered to be due to an indubitable attack of previous syphilis. Dr. Smith inclined to the diagnosis of Hodgkin's disease rather than lymphatic leukæmia.—Professor A. H. WHITE said that the character of the infiltration in the liver was exactly what was seen in lymphatic and other leukæmias and was fairly uniform in the respect that all the portal spaces were infiltrated with cells.

Dr. WILLIAM G. HARVEY in describing a case of Spinal Abnormality said that the patient, a girl, aged 17 years, went to Dr. K. E. L. G. Gunn's dispensary at the Adelaide Hospital complaining of pain in the back which had existed for the last two months; the pain only came on after prolonged stooping over a machine. Her father had noticed some three months previously that she held her right shoulder higher than the left. The patient herself, however, believed that she had never had a straight back. The pain complained of did not seem to be very acute, nor did ordinary physical methods of examination cause any distress. The case appeared to be an ordinary lateral curvature, but an x ray photograph of the spine showed an irregularity in the vertebral bodies which led to an erroneous suspicion of caries of the dorsal vertebræ. More careful examination of the photograph, however, showed that there were only 11 ribs on the left side and that the left side of the fourth dorsal vertebra was also absent. The case seemed to be one of failure to develop the left side of the fourth dorsal vertebra, with total absence of the corresponding rib on the same side.—Professor ANDREW F. DIXON said that the case described was one of extreme anatomical interest and also of extreme rarity.

Dr. ROBERT J. ROWLETTE read the Pathological Report of the Rotunda Hospital, Dublin, for the year ending Oct. 31st, 1907. He gave particulars of post-mortem examinations of nine adult patients. In one case the micrococcus rheumaticus had been obtained in pure culture from the cardiac valves of a patient dying from acute rheumatism. Two fatal cases of pneumococcus peritonitis had occurred in the gynæcological department, due in each case to infected ovarian cysts. Three fatal cases of puerperal streptococcus infection occurred.

EDINBURGH OBSTETRICAL SOCIETY.—A meeting of this society was held on May 13th, Professor W. Stephenson, the President, being in the chair.—Dr. W. Fordyce read notes on a case of Hysterectomy for Fibroid Tumour under Spinal Anæsthesia. It was unlikely, he said, that spinal anæsthesia would ever replace a general anæsthetic in major gynæcological operations on account of the vomiting which was liable to take place inconveniencing the operator but chiefly on account of the limited duration of the anæsthesia produced—viz., about 50 minutes. Still it could be safely and successfully used when a general anæsthetic was dangerous, and the following was an illustrative case. The patient, aged 48 years, came under care for severe floodings and great pelvic pain due to a uterine fibroid. She was so reduced as to be rarely out of bed for the last five years. The fibroid was of about the size of a five months pregnancy. She suffered from heart disease; her pulse was rapid and irregular and low murmurs were heard all over the cardiac area. The pelvic pain was causing great distress. She improved under morphine, ergotin, and cardiac tonics, and at her own urgent request removal of the tumour was decided on. As the heart's action was very laboured and irregular it was performed under spinal anæsthesia. Mr. J. W. Struthers undertook its administration. An hour before the operation the patient was given ¼ grain of morphine hypodermically. He then injected between the third and fourth lumbar spines into the subarachnoid space 6 centigrammes of tropacocaine in a 5 per cent. solution in distilled water. About 15 cubic centimetres of cerebro-spinal fluid were first withdrawn and the dose of tropacocaine was diluted with 5 cubic centimetres of the cerebro-spinal fluid and then injected. The patient was then laid flat at first and at the end of ten minutes, when anæsthesia seemed established, the head was slightly lowered so that she reclined in a modified Trendelenburg position. The operation was then proceeded with as quickly as possible. Thrice the course of the operation was interrupted by sickness and retching, evidently due to traction on the tumour. It was only on putting in the last superficial stitches that the patient winced and said she felt any pain. The operation lasted 43 minutes. There was no headache, after-sickness, or cardiac depression. She made an uninterrupted recovery. Tropacocaine, which recently fell into disuse in favour of stovaine, was now regarded by Bier, Strauss, and Oehler as the safest drug in the great majority of cases and was used by them exclusively.—Dr. J. M. Munro Kerr (Glasgow) recorded a case of "Angular Pregnancy" which Simulated an Extra-uterine Pregnancy. The patient was in her third pregnancy and was seen by Dr. Kerr for what was supposed to be a threatened miscarriage; her two previous pregnancies terminated at full time. When seen by Dr. Kerr she was complaining of abdominal uneasiness and a considerable hæmorrhagic discharge from the vagina. She thought that she was six weeks pregnant. Bimanual examination showed the uterus to be in normal position but slightly enlarged and with a small swelling in the neighbourhood of the left Fallopian tube close by the uterus. This condition seemed very like an extra-uterine pregnancy. Two days later a cast was expelled from the uterus, complete except at one corner. After two days the remainder of the cast with the ovum attached was expelled. The patient made an excellent recovery and the swelling in the neighbourhood of the tube entirely disappeared. The condition of "angular pregnancy" very closely resembled an interstitial ectopic pregnancy, but was now well recognised, and interesting cases had been recorded by Budin, Kelly, Bar, Wassilieff, and others.—Dr. Munro Kerr also read a paper on Rupture of the Uterus and its Treatment, based on a Series of 14 Cases. After discussing the condition and its diagnosis Dr. Kerr stated that as regards treatment he considered that the

best results followed plugging of the tear. He detailed his own results and those of several other writers in support of this and showed how disappointing the results of hysterectomy were, the mortality being about 60 per cent. If hysterectomy was performed he considered the best method was to remove the entire uterus and to pack the pelvis with gauze. Subtotal hysterectomy was not a suitable treatment, because it left behind the most infected part of the uterus and did not admit of such good drainage as when the cervix was taken away.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on May 15th, Dr. J. Allan being in the chair.—Dr. A. Bronner read a short paper on the Intranasal Treatment of Asthma, Hay Fever, and Vasomotor Rhinitis. He gave a short *résumé* of the literature on the subject, showing how for many years intranasal treatment for the cure of asthma had been overdone and then neglected. He drew the following conclusions: (1) That many cases of asthma are of nasal origin and can be cured by intranasal treatment; (2) that an unstable condition of the respiratory centre is present in most cases and is the most important factor in the causation of asthma; (3) that the most successful method of treatment is to cauterise certain hypersensitive areas of the nares; (4) that these areas are the anterior parts of the lower turbinates and the middle of the septum; (5) that the mucous membrane of these hypersensitive parts is, in many cases, apparently normal; (6) that intranasal disease (except hypertrophic rhinitis and polypi) or nasal obstruction is very rarely the direct cause of asthma; (7) that when once asthma has developed it may easily be produced by other than intranasal irritation; (8) that general treatment is in many cases necessary; (9) that hay fever and vasomotor rhinitis can also be cured by the destruction of one or more of the hypersensitive areas, especially of the lower turbinates; (10) that in some cases of hay fever Dunbar's serum (pollantin) is very useful, but not in all; (11) that the cautery points should be broad and thick—the small narrow points generally used are much too small and this is probably the reason why in many cases the treatment does not effect a cure; and (12) that by the careful and prolonged local application of cocaine and adrenalin the operation is rendered practically painless.—Dr. T. Churton showed a case of Unilateral Chorea in a man aged 36 years; not hemiplegic; (?) Huntington's chorea.—Mr. J. Kay Jamieson and Mr. J. F. Dobson showed specimens to illustrate the Anatomy of the Lymphatics of the Colon, demonstrating that though the lymph vessels mainly accompany the arteries those of the region of the splenic flexure are diverted along the upper part of the inferior mesenteric vein to the superior mesenteric glands, and that from the transverse colon certain vessels turn to the left in the omentum and end in the splenic glands.—Dr. E. F. Trevelyan showed: 1. A case of Hemiplegia following convulsions and semi-coma in a girl aged five years with whooping cough; the paralysis disappeared in a week. 2. A case of Complete Facial Paralysis in a boy aged four years, dating from birth. The labour lasted 18 hours, not instrumental; he was the eighth child. Beyond slight asymmetry of the skull there was no malformation nor was there deafness.—Mr. H. Littlewood (with Mr. H. Tempest) showed a specimen of Malignant Disease of the Thyroid removed by operation. A goitre had been present for 20 years but had recently undergone considerable enlargement.—Mr. A. L. Whitehead showed a case of Ectropion following necrosis of the superior maxilla, treated by operation and massage.—Cases and specimens were also shown by Mr. R. Lawford Knaggs and Dr. Allan.

MEDICO-LEGAL SOCIETY.—A meeting of this society was held on May 19th, Dr. James Scott being in the chair.—Dr. F. S. Toogood exhibited a Ruptured Uterus and raised a discussion on the difficulties into which medical practitioners may precipitate themselves when they undertake to take charge of mismanaged cases.—Dr. Louise Appel narrated a case of a lady who was certified as insane owing to the fact that she declined to desist from publishing libellous statements concerning a medical man who had been treating her father. Dr. Appel urged that some feminine minds were greatly disturbed by modern medical theories and treatment.—Mr. J. Howell Evans then discussed "The Medico-legal Significance of Gonorrhœa." He dealt with pre-natal and intra-natal possibilities of infection and suggested that marasmus might be due to infection with the gonococcus; infection was possible from contact with infected articles of clothing; associations with insurance, claims for damages, and professional secrecy were given and the desirability of notification of this disease was urged.—Dr. Appel thought that education in matters of health was preferable to legislation in this connexion.—Dr. Toogood had noticed that ophthalmia neonatorum was not common where active gonorrhœal signs were present; he considered that legislation in these matters was the resource of the unimaginative.—Dr. H. Oppenheimer held that the law could not do what medicine failed to do. The slow chronic gonorrhœal inflammations were the dangerous conditions and were the despair of the gynæcologist; the husband might often "get a bit of his own back" if his wife were so chronically affected.—Mr. Bernard Shaw thought that the denial of the utility of compulsory notification would rejoice the heart of an intelligent anarchist, who might urge that other diseases of the body politic might similarly be unlegislated for; personally, he believed that all diseases should be notified for statistical purposes. At present no one knew what class of cases the private practitioners of the country were attending; the report might name the disease, if not the person afflicted by it. If provision was made for the care of those notified as suffering from diseases there would be little general objection to compulsory notification.—Dr. Stanley B. Atkinson thought that learned societies should occasionally discuss these matters; any compulsory notification or treatment must be made equally to apply to each sex. The Central Midwives Board dealt very severely with certified midwives in whose practice ophthalmia neonatorum occurred.—Dr. S. C. Lawrence, speaking as a medical officer of health, desired to have a limit put to schemes of notification. He was convinced that much incorrect and even false information was sent in. The gonococcus was a very delicate germ which succumbed when its temperature was reduced by being removed from contact with the body.—In reply, Mr. Howell Evans urged the great need of paying more heed to the study of antenatal pathology.—The society decided to hold the second annual dinner on July 20th.

ISLINGTON MEDICAL SOCIETY.—A meeting of this society was held on May 19th, Dr. James Grey Glover being in the chair.—A personal statement by Dr. H. Fraser Stokes, vindicating his position in the case of Cropper *v.* Stokes, was received with acclamation.—Mr. Lawrie H. McGavin read a paper on the Present State of Spinal Analgesia, founded on an extended trial in operative surgery. He preferred stovaine as the active medium. After referring to the frequent employment of this method on the continent and also by Barker, Cheyne, and others in this country, he advocated its use as in some respects more satisfactory than ordinary general anæsthesia in operations below the thorax on the following grounds—viz., its safety provided that antiseptic precautions were observed, its analgesic efficiency, its non-interference with mental consciousness—a consideration with some patients—its avoidance of some of the dangers associated with chloroform and of post-anæsthetic vomiting, finally and chiefly the fact that it prevented shock and could be used where shock already existed.—A discussion followed and a vote of thanks was accorded to Mr. McGavin for his interesting paper.

Reviews and Notices of Books.

Medizinisch-Klinische Diagnostik. Lehrbuch der Untersuchungsmethoden innerer Krankheiten für Studierende und Aerzte. (*Medico-Clinical Diagnosis.*) Von Professor Dr. F. WESENER, Oberarzt des Stadtischen Elisabeth-Krankenhauses zu Aachen. Second revised and enlarged edition, with 21 coloured plates. Berlin: Julius Springer. 1907. Pp. 680. Price M.18.

A GOOD and comprehensive handbook of clinical diagnosis is a most valuable work of reference for the student and for the practitioner of medicine. Improved methods of observation, together with the advances afforded by the scientific study of the pathology of disease, are constantly providing new methods of diagnosis. To keep abreast with such advances is a matter of difficulty for the practitioner who has not time to delve into the ever-increasing number of special

magazines to obtain the details of these methods; moreover, he requires them to some extent appraised by those with more extended opportunities for trial. A handbook of clinical diagnosis should also give full recognition to the importance of the time-honoured means of physical examination afforded by inspection, palpation, percussion, mensuration, and auscultation. Too often they become mere laboratory handbooks and fail to present the subject in a complete form. In the book before us Professor Wesener gives an exhaustive and critical presentation of clinical diagnosis in regard to medical diseases in its widest sense. He divides his book into three parts.

The first part is devoted to the methods and technique of examination and to general principles of diagnosis. The various methods of examination are described and the means of investigation by the use of special apparatus, together with the general scope of physical examination. It commences with an important section devoted to investigation by inspection, including under this heading not only ocular inspection but that resulting from the employment of special apparatus, from electrical methods, from the use of the Roentgen rays, and from chemical, microscopical, and bacteriological methods. A useful chapter is devoted to consideration of the principal pathogenic bacteria, with short summaries of their cultural and staining reactions and of their pathogenic associations in man and animals. The second section of this first part deals with examination by tactile methods and includes not only palpation in the restricted sense of that word but also instrumental examination and graphic methods of record such as dynamometry, sphygmomanometry, and thermometric observations. The instrumental methods are described and their uses are indicated but they are not illustrated by figures or by tracings, as is customary in most English and American books on this subject, which certainly serve to make the accounts given more clear and useful. Examination by means of the auditory sense is next considered, forming a third section. Auscultation and percussion are described in great detail as well as their uses in the investigation of the condition of the various organs. The first part concludes with the general consideration of the way of investigating the previous history of the patient.

The second part of the book, which is by far the largest, is devoted to special diagnosis and is divided into sections, each one dealing with the methods of investigation applied to one of the systems of the body—viz., the cutaneous, respiratory, circulatory, digestive, uropoietic, genital, and nervous systems respectively. The consideration of each constituent organ in its normal and pathological relations is most systematically and exhaustively carried out. Special methods of investigation are described and their value and significance are indicated. The details of chemical tests, of methods of staining, and of all procedures requiring precision in their execution are given in such a manner as to be intelligible and practical. In illustration we may refer to the accounts given of the investigation of the gastric contents as obtained after vomiting or after the recovery of a test meal by the stomach tube. The methods of giving the test meal and of passing the stomach tube are first outlined; then the macroscopic examination of the material obtained is described. The chemical examination as regards acidity, ferments and their activity, the presence of pathological substances, and the absorptive power of the stomach, is described, and the chief methods at present in vogue are carefully detailed. Lastly, the microscopical examination of the gastric contents, including the bacteriology, is discussed. The examination of the urine is considered in similar manner and the description of the various methods employed in its qualitative and quantitative analysis is excellent. The chemical section includes the tests for various substances which may occur in urine as a result of the taking of drugs, such as acetanilid, antipyrin, lead, bromides, chrysophanic acid, copaiba, phenacetin, sandalwood oil, sulphonal, tannin, and urotropin. The section devoted to the nervous system also contains a great deal of useful information conveniently arranged.

The third part of the book is comparatively short and is entitled "Applied Diagnosis." The various diseases are separately considered and their special features are indicated. The author has economised space by simply stating very briefly the main symptoms and signs of each disease, giving cross references to the other parts of the book in which they are described in detail. Apart from this, there is nothing to notice especially in this part which is rather a brief catalogue of the clinical characters of these diseases than a consideration of the manner of distinguishing them from conditions with which they are likely to be confused, the sense in which the term "applied diagnosis" is usually employed in this country. The illustrations take the form of plates, some of which are very good, such as those of the various forms of blood corpuscles, those of the brain, and of the regional distribution of the peripheral nerves. It would, however, be an improvement if figures were given in the text. In the preface to the present edition Professor Wesener states that the description of the application of the Roentgen rays to diagnosis has been contributed by Dr. Sträter. These sections are worthy of the reputation of the book.

The book as a whole is well produced. The arrangement of the matters dealt with is convenient and well adapted for easy reference. There is a good analysis of the contents preceding the text and a trustworthy index following it. We can recommend the book as a good manual and a useful work of reference.

Tropical Diseases: a Manual of the Diseases of Warm Climates. By Sir PATRICK MANSON, K.C.M.G., M.D. Aberd., F.R.C.P. Lond., F.R.S., LL.D. With seven coloured plates and 241 plain figures. Fourth edition. Thoroughly revised and enlarged. London, Paris, New York, Toronto, and Melbourne: Cassell and Co., Limited. 1907. Pp. xx.–876. Price 12*s.* 6*d.* net.

ANYONE comparing this edition with the first that appeared in 1898 cannot fail to be struck with the vast additions which have accrued to our knowledge concerning tropical medicine since that year. Nor is this surprising when we consider the large number of workers engaged in this field of medicine. The schools of tropical medicine which have been established in England, France, and Germany have sent out a large number of trained students well versed in the lines of investigation for the manifold diseases met with in warm climates. In addition many Commissions have from time to time been despatched by our own Government and those of India, America, Germany, and Portugal, and also by the Royal Society, to throw light on certain points in tropical diseases. And what has been the result? We see it in the remarkable facts gained as to the etiology of several of these affections, as for instance, sleeping sickness, kala-azar, and yellow fever. Moreover, the present time has witnessed the publication of many valuable treatises on the subject, such as the works of Schenk, Mense, Jackson, Brooke, and last but not least, the work under review. The student of tropical medicine can no longer complain of the want of equipment either practical or theoretical.

The author in his introduction deals with the points characteristic of this branch of medicine; he draws attention to the self-evident fact that a student of tropical medicine in particular must be a naturalist before he can become a scientific epidemiologist, or pathologist, or a capable practitioner. He next enters on the discussion of the various diseases, commencing with malaria. Here the student will find full and entrancing particulars concerning

the agency of the mosquito in its etiology, illustrated by well-executed plates. The mosquito theory was especially insisted on in his well-known Goulstonian lectures and proved to the hilt by Major Ronald Ross—to whom Sir Patrick Manson had suggested it—after a long and patient investigation carried on in the most adverse circumstances of tropical heat and of constant movements incidental to his service. The subject was clenched by two experiments carried on by the London School of Tropical Medicine, a *negative* experiment by Dr. L. W. Sambon and Dr. G. C. Low, who lived during the febrile season in one of the most malarious regions of Italy, protected from mosquitoes, without incurring malaria; and a *positive* one, in which infected mosquitoes from Italy equally infected two subjects, the late Dr. P. Thorburn Manson and Mr. George Warren, the laboratory assistant at the London School of Tropical Medicine, neither of whom had ever been exposed to any malarial influence. The whole subject of malaria, embracing the staining of the micro-organisms, the clinical symptoms, and the treatment, is exhaustively entered into, whilst this section concludes with an account of the mosquito.

We next come to the subject of trypanosomiasis and here the student of tropical diseases will find an account of one of the greatest advances of medicine of our times. Sir Patrick Manson speaks favourably of the treatment of sleeping sickness by atoxyl and has found its administration by intramuscular injection the most advantageous. The article is enriched by a very beautiful plate of the Glossina palpalis.

Kala-azar is another disease of the etiology of which we now possess accurate knowledge. The views of preceding observers are summarised and then follows a very full description of the Leishman-Donovan organism. The relationship of oriental sore to the disease is alluded to and the author throws out the suggestion that in the use of a vaccine derived from the former a remedy for kala-azar may be found. In the description of relapsing fever we find the discoveries of Ross and Milne, Dutton and Todd duly chronicled, whilst the biological nature of the spirochæta is discussed. We note next a very good description, with its accompanying plate, of ticks which have been shown recently to play an important part in human and veterinary pathology.

We then come to the brilliant work of our American brethren in the elucidation of the etiology of yellow fever. The germ, it is true, is as yet undiscovered but the parallelism between the causation of yellow fever and malaria is very complete; the brilliant results obtained by Surgeon Major Gorgas, of the United States Army, in the matter of prophylaxis and of stamping out the disease by protecting the patients from the mosquito are narrated, and a word of warning is uttered against the future introduction of the terrible disease into Asia after the completion of the Panama Canal.

Blackwater fever is very thoroughly considered. The facts for and against the malaria theory, the quinine theory, and the specific theory are duly narrated, concerning which the author considers at the present time that it is wise to preserve an open mind, as the etiology is evidently not yet settled. Passing on to dengue, we notice that Sir Patrick Manson does not mention relapsing fever as one of the diseases from which it should be diagnosed. The two diseases have many symptoms in common. Both commence with a rigor, in both the patients have acute joint pains, headache, and gastric symptoms throughout until the remission; in both there is an indefinite rash, epistaxis is fairly common in both, and in both we find a crisis, followed in a few days by a relapse, and abortion is common after each affection. Plague naturally at the present time merits, and has received, an excellent account. There is an omission, however, in treating of Haffkine's injection, inasmuch as no mention is made of Simpson's refutation of the argument once used against it—namely, that the individual injected is rendered more liable to the disease for a short time after the operation; nor do we find the treatment by large doses of carbolic acid which has been found so useful in China alluded to. The subject of enteric fever might have been dealt with more fully. Typho-malarial fever is considered separately from Malta fever; the recent investigation resulting in the discovery that the milk of infected goats is the cause of the latter is mentioned, thus bringing the subject fully up to date. In the chapter on sunstroke we are glad to see that the excellent observations of Colonel Maude and his actinic theory are noted.

The subject of beri-beri is very fully considered: the various theories are criticised and due stress is laid on the danger to the patients of cardiac dilatation. It is a curious fact, we believe, that the disease has only been shown in the hospital returns for the last 20 years as existing in the Seamen's Hospital, Greenwich. In the chapter on cholera we fail to find any mention of the late Sir George Johnson's lucid theory of collapse, the only theory that will explain all the symptoms. The great success attending the treatment instituted by Major Harold Browne, I.M.S., by oil of eucalyptus is also omitted. The chapter on dysentery contains much more information than that in the previous edition. The distinguishing post-mortem features of amœbic dysentery as shown by Rogers might perhaps have been given more fully; whilst the author in his enumeration of the types of dysentery does not mention a fourth type—namely, the dysentery of war—which, as revealed by the Commission appointed to investigate the subject during the late South African war, did not show any organism at all. Hill diarrhœa and sprue then follow. In the latter disease the treatment with meat juice and underdone meat advocated by Mr. J. Cantlie has not apparently met at the hands of the author with the same amount of success as other observers have found.

Space forbids us to mention all the other subjects treated but we may add that the reader will find the section dealing with parasites very full and up to date. Sir Patrick Manson is to be congratulated upon the appearance of the fourth edition of his excellent and valuable work.

Songs from the Downs and Dunes. By HABBERTON LULHAM. London: Kegan Paul. 1908. Pp. 95. Price 3*s.* 6*d.* net.

THE publication of a book of verses entitled "Devices and Desires" some years ago proved that the profession of medicine numbered in its ranks a real poet, and the volume before us proves that its author is in a fair way to fulfil the promise of his earlier work. He rises conspicuously above a crowd of modern writers of sufficiently meritorious verse in that although at times we seem to catch the echo of master voices in his songs, yet still behind them all there is the vigorous and distinct poetic personality of a Nature worshipper who combines the observation of Richard Jeffries with much of Wordsworth's spirit, but who possesses a gift of varied and generally beautiful expression which is entirely his own. This is especially apparent in the long poem "On the Downs," which we commend heartily to all who love the Downs and also to those who are insensible to their clean life-bringing influence, for Mr. Lulham has splendidly succeeded in capturing the charm which they have missed. Take, for instance, the lines:—

> "And when the great salt winds come streaming by,
> How the cloud-shadows smoke across the vales,
> And as each rounded down is dimmed a space,
> It seems to sink, then upward heave once more
> Into the sunshine, till one dreams he sees
> The dear Earth-Mother's bosom rise and fall."

And again:—

> "And with closed eyes I once again breathe deep
> Thy sea scent and the spice of gorse and thyme
> With floated balm of many a blossomed vale."

In this, as in other poems, Mr. Lulham shows a very accurate sense of colour, for which he finds at times quite remarkable expression:—

> "It is the hour now of the wondrous blue,
> Deep, rich, and luminous, old painters used
> To drape about their stately dreams of God."

In expressing our admiration of this finely sustained poem we must not omit to mention the exquisite little fairy lyric, which is the best of its three inset songs, or the fidelity with which he has portrayed the old shepherd and his flock. In such passages lies the secret of Mr. Lulham's success; he sees Nature in relation to man, and though he looks at life through the veil of fancy he sees it clearly and sees it whole. The shorter poems following "On the Downs" have a more intimate human interest; "The Golden Chain," "Belle Sauvage," and "Passion's Fidelity" are bold in conception and finely expressed, their themes being in marked contrast to a charming little episode in a slum child's country holiday, which has happily escaped mawkishness, and breathes a tender sympathy with child life that is no less apparent in four other poems. The 50 which make up the book are of great diversity but uniform in their sincerity, the work of a man singing because he must. In "The Music of the Gods" there is at least a hint of greatness, but after the poem "On the Downs" the finest contribution to the volume is, we consider, "Love's Neophyte," in which a delicate picture of a moonlit wood forms the setting of an idyll with a noble appeal to a universal human experience; this poem is notable for the delicacy with which it handles a theme that might have suffered terrible degradation in the grip of a less wholesome mind; as it stands it is an achievement of which any poet might be proud. We were taken by the echo of the Theocritan line Μᾶλα τεὰ πρώτιστα τάδε χνάοντα διδάξω in Mr. Lulham's line:—

> "Fair fruitage orbed from rosy floating buds."

We have only space to mention the dozen sonnets which worthily round off the book. "Reveille" describes a sunrise in a striking piece of imagery and "The Last Help" is equally beautiful in feeling and accomplishment, whilst "To the Death" employs the antithetical method of the Elizabethans to good effect.

We have nothing but praise for these poems because they are of a stuff warranting so rare a procedure. Mr. Lulham's Envoi has the true ring in it and we trust that this, rather than his sad little song, "Time to Go," foreshadows the heart with which he will set about his next volume. We are sure that it will be welcome to those medical men who appreciate the relaxation which good poetry affords, a body to which we introduce with genuine pleasure the poems of a professional brother, work destined, if we mistake not, for the admiration of a far wider circle of readers.

An Atlas of Illustrations of Clinical Medicine, Surgery, and Pathology. Compiled for the New Sydenham Society (a continuation of the "Atlas of Pathology"), chiefly from original sources. Fasciculus XXVI. (double number), being XXIV. of the Clinical Atlas. London: New Sydenham Society; agent: H. K. Lewis. 1907. Price to non-subscribers, 1 guinea. Eight plates.

IT is a very great pity that the New Sydenham Society does not receive the support which it deserves. The great work that it is now bringing out should prove of value to nearly all medical men and especially to those in general practice, for it is not too much to say that plates such as these would assist in the diagnosis of many obscure cases. Only some 900 at present subscribe to the society and the smallness of the number much limits the scope of the society's labours; with a doubling of the numbers the amount of material given for the subscription could be largely increased. The plates in the present part deal with eczema occurring on the hands of a paper-stainer—a form of lichen associated with leucoderma; two plates illustrating a ringworm caught from a horse; some typical illustrations of gout of the hand and ears; Fordyce's disease of the lip, with an interesting article by Mr. Jonathan Hutchinson; and two plates of cases of Darier's disease. The illustrations are excellently reproduced.

LIBRARY TABLE.

Diseases of the Male Generative Organs. By EDRED M. CORNER, M.A., B.Sc. Lond., M.B., M.C. Cantab., F.R.C.S. Eng., Surgeon to Out-patients, St. Thomas's Hospital; Senior Surgeon to Out-patients, Children's Hospital, Great Ormond-street, &c. Oxford Medical Publications. London: Henry Frowde and Hodder and Stoughton. 1907. Pp. 279. Price 5*s.* net.—This manual has been written with the intention of considering the male generative organs apart from the functions of the urinary apparatus; the prostate has been purposely omitted, as it is treated in a separate volume of the "Oxford Medical Publications," and syphilis and gonorrhœa are not systematically considered on account of limitations of space. The selection of material has been usefully made and the book contains much of practical interest. At the same time it cannot be considered as an exhaustive treatise for the practitioner, as the technique of the various operative procedures which are recommended has been omitted. We think a little more detail in this respect would improve the book; for instance, on p. 15 the reader would like to know how much pure carbolic acid should be injected into a hydrocele sac treated by such a method. The student will find the symptomatology and differential diagnoses of the affections of the parts concerned discussed lucidly and with authority, and the book will help him materially in preparation for practice and for examinations. The practitioner will find the pages which deal with the after-history of patients who have been operated upon for hydrocele, varicocele, and other conditions pregnant with useful suggestions. Mr. Corner reiterates his opinion that the attitude of the public services in insisting on a radical operation for varicocele in the case of all candidates who may possess one is foolish and even harmful, and he adduces statistics to prove his point. He enters very carefully into the subject of imperfectly descended testicle and its relationship with hernia, and his observations are distinctly valuable; in dealing with the operations proposed for that developmental shortcoming he does not mention the plan of anchoring the testis to the thigh, which was, we believe, first proposed by Mr. C. R. B. Keetley in 1894 and has since been followed by other surgeons. Mr. Corner pins his faith in certain cases, which he carefully distinguishes, to the method of reposition of the testicle within the abdomen, a procedure which he has dubbed with the smooth-sounding title of "orchidocœlioplasty." The question of the relative value of such an imperfectly developed organ in its internal and external secretory functions is carefully dealt with. Other subjects which receive more prominence than is usually afforded them are torsion of the testicle and vesiculitis. The author's remarks on the ethical and moral aspects of his theme seem to us to be useful and temperate. There are some indications of hurried writing but they do not greatly detract from a book which has much to commend it and which has been written by a man well qualified for the task. The illustrations are capital.

A Surgical Handbook for the Use of Students, Practitioners, House Surgeons, and Dressers. By FRANCIS M. CAIRD, M.B. Edin., F.R.C.S. Edin., and CHARLES W. CATHCART, M.B. Edin., F.R.C.S. Eng. and Edin. Illustrated. Fourteenth edition. London: Charles Griffin and Co. 1907. Pp. 325. Price

8s. 6d. net.—Eighteen years have passed since we welcomed the first appearance of this useful little work and now its fourteenth edition is before us. This in itself is a sufficient recommendation of its authors' labours. The scope of the work is known to most of our readers and is sufficiently indicated in its title; it does not deal with surgical anatomy or differential diagnosis. Its appeal is chiefly to students and young practitioners, and those of the present generation will find that the work has been kept thoroughly in touch with modern requirements. The book is mainly concerned with methods of treatment and is written from a thoroughly practical standpoint. We have only noticed one point which it seems desirable to amend. On p. 81 in the section on foreign bodies in the ear no mention is made of the advisability of giving an anæsthetic for their removal. It is often a necessity in the case of children.

The Calendar of the University of London for the Year 1907–1908. Pp. 938. Price 5s. net. *Regulations and Courses for Internal Students. Regulations for External Students.* Published by the University of London, S.W. 1907.—We have received these three volumes from the University of London and we draw attention to the fact that the Calendar is now issued as a single volume instead of in three parts as heretofore, and that the detailed regulations for internal and external students respectively are given in supplementary volumes. The Calendar contains an interesting history of the University, the University of London Act, and its statutes. The remaining information is such as is commonly given in a University Calendar and includes a brief account of the constituent schools and colleges. The other volumes of regulations contain the full syllabuses of the examinations in the various faculties, with the regulations and exemptions in regard to them as they affect internal and external students respectively. All three parts are well and clearly printed and have been carefully edited. It should be borne in mind that the University no longer prints examination papers in its Calendar but issues them separately at a small price.

First-Aid to Miners. By WM. B. ARTHUR, L.R.C.P. Edin. &c.—In the section relating to electric shock, after briefly stating the general principles upon which electric light and power are distributed in mines, the author gives clear and concise instructions for cutting off or diverting the current from the victim, and especially does he emphasise the manner of dealing with broken trolley wires which are so difficult to handle. These are a very fruitful source of danger seeing that it is impossible for them to be covered with insulating material. Special precautions are given for handling patients in contact with live wires, and the signs and symptoms of electric shock and the proper treatment to be employed are described.

THE FRANCO-BRITISH EXHIBITION.

FOR the moment it is difficult to say more about the Franco-British Exhibition than that it gives good promise. The grounds are tastefully laid out; the cream white palatial structures, interspersed by lagoons or canals with high and white bridges, recall in their general aspect the great World's Fair held at St. Louis, U.S.A., four years ago. It is true that the commissioner-general, Mr. Imre Kiralfy, himself hails from America, but then before the St. Louis exhibition there was the beautiful white of the quadrangle of buildings that stood on the Place des Invalides at Paris in 1900. To-day also, while we have the white and the water, we have for the Court of Honour an Indian style of architecture that is new in the history of exhibitions. The total navigable distance, including the lake in the Court of Honour, exceeds half a mile. Here are colonnades which gave welcome shelter on the day of the opening ceremony when the rain fell persistently and without pity on the vast crowd that had assembled. But little was seen of the exhibition on that day. Rain, mud, stray planks, plaster, scaffolding, great cases which were not even opened, still less unpacked, were the principal objects that met the gaze, when it was possible to see anything at all over the agitated sea of umbrellas. Certainly, for those who do not live in London it would be best to postpone their visit for another fortnight or more. At the present moment some goods are still unpacked and the show-stands which are to contain them are being gradually erected. The main buildings are finished but the installations within were barely commenced till after the formal opening of the exhibition.

Unlike most other exhibitions, there is a considerable uniformity of design. The fact that only two nations were concerned probably made it easier to agree on a general scheme. The 140 acres of land at Shepherd's Bush were divided in half and the French built on their half sections matching the same sort of structure on the other side. Thus, the British Colonies face the French Colonies and on one side of the lake we find the Palace of French Industries and on the other side the Palace of British Textile and Chemical Industries. This latter section, by the way, is well-nigh completed and is one of the few parts of the exhibition where there was something to be seen even on the opening day. Immediately behind this is the British Education Section and it also is now almost complete. Huge spotted maps of the United Kingdom cover the broad expanse of the wall and show at a glance the distribution of schools and colleges. Underneath them there are specimens of the pupils' work and of the methods of teaching, both technical and general. This includes chemistry, plumbing, and other sciences and crafts which play a part in the preservation of public health. In what is known as the Hall of Science considerable progress has been made and here also are exhibits which are of importance to sanitary science. The scientific instruments for dealing with coal-tar products and the discovery of argon and helium will be shown in this section by Sir William Ramsay.

In the great court, formed by the three machinery halls, there is a most elegant pavilion containing the exhibits of the Paris municipality. These are always of the greatest practical interest. In Paris itself in 1900, at the Liège Exhibition, at the St. Louis Exhibition, and on other occasions we have seen and were able to speak in terms of unalloyed praise of the art and utility combined in these graphic illustrations of what the municipality has done for the people of Paris. The doors to this pavilion reproduce the Porte St. Jean and entrance to the Hôtel de Ville, as also the Arc de Nazareth, a portion of the Hôtel Carnavalet, Madame Sévigné's beautiful home, where visitors to Paris may find a permanent municipal museum. Here it is possible to trace what the Romans did when they governed Paris, down to the most recent innovations in local administration. The Hôtel or Musée Carnavalet in Paris is not well known to English visitors and yet it is most instructive. When the pavilion of the Paris municipality is completed it will be time to notice not merely the doors but what is contained within.

Apart from the Shepherd's Bush area there is a succession of eight halls which form a long passage beginning close by the Uxbridge-road and Shepherd's Bush stations and reaching the main grounds which commence close to Wood-lane station. This is a serious part of the Exhibition. It has no particular architectural pretensions and makes a very good beginning for a visit. Indeed, the Uxbridge-road is called the main entrance and it is quite a long walk to go through first the British liberal arts and exhibits, then the social economy hall, and next the alimentation and agricultural building. After these come the French education building, the agricultural palace, the alimentation hall, and the liberal arts palace. Next are some steps and the visitor emerges into the main building. Before him is the broad vista of the Court of Honour and its lake. In the eight sections that form the long passage all was serious work; now there is the beauty of the architecture, of the gardens, of the music from the bands and sounds of joy, as pleasure parties embark in the boats or hasten to the gardens and the side shows. Undoubtedly the scene, already animated, will become very cheerful and pretty when the exhibition is completed and the great crowds of visitors arrive.

Now that the exhibition has been so successfully and enthusiastically inaugurated, as it were, a second time by the visit of the chiefs of the two States concerned, no one can doubt that great benefits will result from this enterprise.

THE LANCET.

LONDON: SATURDAY, MAY 30, 1908.

The Royal Navy Medical Service.

THE appointment of the new Director-General of the Royal Navy Medical Service has been very well received, and Inspector-General JAMES PORTER who entered recently on his duties will find on all sides a desire to assist him. The occasion seems to us a fit one for some reference to the state of the department, the administration of which cannot be regarded just now as very easy. There can be no doubt that within the memory of living men the position of the naval surgeon has been immensely improved and some of these reforms are of comparatively recent date, but it is equally true, judging by the tone of certain letters which we have been for some time receiving from naval medical officers, that a considerable amount of dissatisfaction still exists in the service—a circumstance which is corroborated by the regrettable fact that there is now little competition for the commissions vacant. The strict discipline and rigid etiquette of the service deters the free expression of the junior officers' views to their official superiors, and no doubt this is the reason why we have been made the recipients of communications which, while they have seemed to us not to be fitted exactly for publication, are none the less honest expressions of opinion and ought to have some weight. It must be admitted that most of the communications which we have received on the subject have been written by officers young in the service, so that it is probable that with greater experience there would have come a maturer judgment, but there seems to be considerable justice in some of their complaints, so that we propose, not for the first time, to draw the attention of our readers to the matter. It is very important to the nation that the Royal Navy Medical Service should be strongly officered and the only way to get rid of the spirit of distrust which prevents the proper supply of officers is to deal openly with the questions at issue.

The drawbacks to the service complained of with most regularity by the naval medical officers may be classed as purely naval and purely medical, for, as might have been expected, they have their origin in the fact that there must always be difficulty in making professional life square exactly with life in a combatant service. The purely naval grievances are, however, not great—the principal one being the allotment to the medical officer of inferior cabin accommodation to that to which he is entitled. We fear that as our ships of war have become more complicated engines of destruction in which every consideration must yield to the needs of the executive, whether it be concerned with the speed of the ship, the guns, or the torpedoes, the living accommodation for both officers and men has become more and more cramped. We desire to be among the first to protest against the medical officers being apportioned accommodation of an inferior nature to that bestowed upon other officers of corresponding age and rank, but we have been assured upon inquiry at headquarters that no distinctions are made which are not dictated by the exigencies of the service. There is also the grievance in the matter of boats. It has often been pointed out that minus the healthy exercise of sail drill and other evolutions aloft (now things of the past), with increased employment of men between decks and in confined spaces, considerations of health would indicate increased boat work as a most valuable factor in naval hygiene. There ought, therefore, to be a plentiful supply of boats in every man-of-war, both as a matter of health and of convenience, and we think that complaints having their origin in the insufficient supply of boats, whether for medical officers or others, ought to be met in the obvious way by the Admiralty. Lastly, the naval medical officers should be placed in the same position as the officers of the Royal Army Medical Corps as regards disciplinary authority and the punishment of their staff and the patients under them. The complaints which more directly concern the medical side of the life of the naval medical officer centre, more or less, on the medical school at Haslar. When we say that they concern the quality and nature of the instruction given there and the character and conduct of the examinations for passing out of Haslar and for promotion in the service, we wish to add that no single word of personal depreciation of anyone has reached us—the criticisms have been directed against the system prevailing at Haslar, not against those who have to carry it out, and we are not ourselves in love with that system. It was a retrograde measure to withdraw the naval medical candidates from a common course of instruction with their *confrères* of the Army and Indian Medical Services, and we should welcome a consideration by the Admiralty of the advisability of approaching the War Office with a view to common instruction again. The new Army School of Medicine established in London might be able to serve also the needs of the Naval Medical Department, and if this could be arranged with the War Office it seems to us that both efficiency and economy would result.

Failing this, the course at Haslar requires strengthening. No doubt it would be, as has been suggested by one of our correspondents, an excellent thing from the student's point of view to select leaders in their respective scientific branches to be professors of hygiene, surgery, epidemiology, and so on at Haslar, but as the number of officers annually under instruction is so small the State might very well object to paying the eminent teachers proper salaries, and we emphatically protest against any extension of the mischievous principle that it is the duty of medical lecturers to give their services, or at any rate to render them for totally inadequate remuneration. The eminent professors must, we think, be regarded as quite without the scope of the Haslar courses of instruction, and only some coalition scheme between the navy and the army could secure their services on proper terms. But such expensive tuition is quite unnecessary; all that is required is that the courses should be made more practically useful in certain directions than they are at present. The medical side

of recruiting, for example, is not systematically taught at Haslar. In two recent articles we have called attention to the importance of a thorough knowledge of this important duty and it would save much money and would largely promote efficiency if the navy followed the commonsense practice of the army and placed this branch of the service entirely in the hands of the medical department, under the supervision of a competent senior medical officer responsible to the Admiralty alone. The curriculum at Haslar is not the only thing on the educational side of their calling of which the young naval medical officers complain; the absence of adequate clinical teaching in the three large naval hospitals is also alleged. While it must be emphasised that these institutions exist primarily for the cure and comfort of patients and not for the instruction of naval medical officers who are supposed already to have received their professional education, we have often thought that a skilled pathologist might be appointed to each institution whose duty it would be to give demonstrations on selected cases to those surgeons who could be spared from the duties of the service afloat. But in harbour ships, in gunnery and torpedo schools, and in dockyards large bodies of men are constantly employed in dangerous work, and professional assistance must ever be at hand in case of emergency. Uninteresting and often irksome as being confined to ship or barracks must often be, it cannot be avoided. To do nothing in constant expectation of having to do much must ever remain the attitude of many a naval officer, medical or other, and classes of advanced pathology can never be instituted at the hospitals upon any scheme which would detach naval medical officers from their actual routine.

The question of foreign service was referred to in one communication which we have received from a naval medical officer who was aggrieved at not going abroad in what he considered his due turn. The recent redistribution of the different fleets has, no doubt, altered the conditions of service for all officers. We well remember the time when the chief complaint among naval medical officers was founded upon their excessive service abroad. The reverse seems now to be the case and at present there is difficulty in getting service abroad when it is desired. These matters are determined by other than purely medical considerations and we have no suggestion to offer as to their alteration. In every profession, in every part of the world, in every age, interest, favour, and influence have affected, and ever will affect, to a greater or less degree the career of individuals. What is equally certain is that a really good man usually succeeds in the end in securing the recognition of his merits and never sinks to the level of the idle or the unintelligent. It would seem unfortunately that complete impartiality in the matter of appointments can never be secured in any service while man is man, but with regard to the other grievances in the Royal Navy Medical Service we are of opinion that for the most part they are capable of easy reform and inexpensive removal if the authorities can be persuaded to set earnestly about the task. We greatly desire to see the highest class of young medical men attracted to the navy as a career. The life certainly possesses many advantages—e.g., a secure income, a liberal pension, and small expenses; genial comrades and prospect of travel in many lands amongst many peoples. Especially such a life should attract those who have had the advantage of a public school and University education and who feel drawn to a career which offers chances of sport and adventure. Not that the Royal Navy Medical Service should be entered merely from this point of view. It is a scientific service and there is no reason why its position as such should not vastly improve. The scientific physician will find now, as HUXLEY did in early Victorian days, that there is in the service abundant work for his energies. The distribution of disease throughout the world, its effects on the different races of mankind, the vicissitudes of climate, and the growth and health of those under his immediate charge will afford him ample opportunity for the exercise and development of his faculties of observation. If his professional work in his new sphere of duty differs much from that to which he has been accustomed in his hospital pupilage, the naval medical officer will find the application of his knowledge neither less important nor less interesting. One of the most philosophical and best educated members of our profession, the late Dr. P. M. LATHAM, remarked, "that the practice of medicine is, upon the whole, largely indebted to service physicians, because, from the nature of the surroundings under which they are often obliged to do their work, they must skilfully adapt their practice to circumstances, and gather how much successful treatment is concentrated in one chief indication and one chief remedy."

The Influence of Pregnancy upon Certain Medical Diseases.

THE effect produced by the occurrence of pregnancy upon the course of any one of the acute diseases is a matter of great importance not only to the obstetric physician but also to the general physician. A large amount of literature has been published dealing with the subject but it is contained mainly in papers scattered through the medical journals and the transactions of various medical societies, and Dr. HERBERT FRENCH has conferred a considerable benefit upon those interested in this matter by devoting his Goulstonian Lectures to considering the Influence of Pregnancy upon Certain Medical Diseases, and of Certain Medical Diseases upon Pregnancy.[1] As he points out, in those cases in which the pregnancy is allowed to run its natural course the responsibility for the patient's health must rest with the physician, and it is important, therefore, that he should be acquainted with the possible influence of the disease on the pregnancy and of the pregnancy on the disease. As there are but few medical diseases met with in women in which the occurrence of pregnancy is impossible it is evident that the subject is a very wide one and the lecturer has therefore been compelled to consider only some of the more important affections which may complicate this condition.

As an interesting example of a disease for which pregnancy appears to be directly responsible Dr. FRENCH describes herpes gestationis. The curious manner in which this disease returns in successive pregnancies and at other

[1] THE LANCET, May 2nd (p. 1257), 9th (p. 1321), and 16th (p. 1393), 1908.

times only during the puerperium is pointed out, and the marked relationship which seems to exist between the bullous dermatoses, including herpes gestationis, and eosinophilia, first called attention to by BETTMANN and others, has been confirmed by Dr. FRENCH himself. The etiology of this disease is very obscure but it seems certain that its cause is to be sought within the body and that it is not due to any irritant acting directly on the skin. It seems likely, indeed, that it is one of the manifestations of the so-called toxæmia of pregnancy. The many interesting problems connected with this and similar conditions, such as the likelihood of its transmission to descendants, are questions which, in Dr. FRENCH'S opinion, could be settled best by the method of collective investigation. Without doubt there are many problems in medicine which can only be solved in some such way, and nothing is more disheartening to the investigator of some particular condition than the frequency with which in the histories and clinical reports of cases compiled by others the special point on which information is desired is found to have been overlooked entirely. After a short account of that grave and fatal disease impetigo herpetiformis which is almost limited in its incidence to pregnant women and which, like herpes, appears to be a manifestation of a toxic condition, Dr. FRENCH passes on to a consideration of the pyelonephritis of pregnancy, in connexion with which a large amount of work has been done in recent years. The most important factor in its causation is held to be the dilatation of the ureters which is so constantly found and which is considered usually to be due to the pressure of the pregnant uterus on these structures at the brim of the pelvis; and the subsequent infection by the bacillus coli, the organism most usually present, of the urine through the blood stream. The dilatation of the ureters which has been demonstrated in most of these cases raises an important anatomical point. The researches of BARBOUR and others by the study of frozen sections of the anatomy of the pregnant uterus have shown that it is impossible for it to press on the ureters at the pelvic brim, but it is possible for such pressure to be exerted at a spot on the ischium in the true pelvis. This fact, no doubt, is an explanation of the discrepancy between the statements that the ureter in such cases is usually dilated about one inch from the bladder and that such dilatation is produced by the pressure of the uterus at the brim of the pelvis. Whether the entrance of the colon bacillus into the general circulation is favoured by some accompanying condition such as chronic constipation remains for future investigators to decide.

One of the most difficult problems in medicine is undoubtedly the relation of non-suppurative renal affections to pregnancy. A good deal of the confusion which has arisen is, we think, due to a loose use of terms and the failure to distinguish between cases of kidney disease directly due to pregnancy and cases of the same kind merely coinciding with that condition. When we consider how difficult it often is to determine whether or no the pregnancy is the real and only cause of the renal affection this is not to be wondered at. Almost every variety of pathological change in the kidney has been described, for example, as occurring in cases of eclampsia and a source of error to which too little attention is often paid is the possibility of many of the degenerative changes found in the kidneys and attributed to various toxic bodies being in reality the results of post-mortem autolysis. Dr. FRENCH allies himself to those observers who regard the kidney changes in pregnancy as essentially similar to those which may occur in scarlet fever, and believes that there is a difference only in degree and acuteness between the renal changes in eclamptic cases and those in cases where renal œdema is a prominent symptom early in the pregnancy and in which no eclamptic convulsions occur. He brings forward a strong argument in favour of this view in the fact that out of 71 cases admitted into hospital for the œdema type of nephritis no less than four had had a typical acute attack of eclampsia in a previous pregnancy. To the very important question as to whether if a pregnant woman develops evident œdema of renal type with albumin and tube casts in the urine during the eighth month of pregnancy is she likely to develop eclampsia no certain answer can be given. It is clear, however, that if the œdema develops early in the pregnancy it is unlikely that eclampsia will occur and that the majority of cases of eclampsia do not have any œdema; thus in 49 per cent. of the cases of eclampsia collected by Dr. FRENCH there was no œdema at all and in 35 per cent. it was but slight. There are many other interesting questions in connexion with this subject, such as the effect of multiparity, the influence of twins, and the occurrence of albuminuric retinitis and its significance, all of which Dr. FRENCH considers. The association of tetany with pregnancy presents many curious features, not the least of which is the fact that the disease is one of extremely local occurrence; for example, it is not uncommon in Heidelberg and Vienna, was formerly common in Paris and is now rare there, and is very rare in Great Britain and America. Not only does this disease seem to be almost endemic in some places but it appears to be markedly more common in the late winter and early spring than at other times of the year.

There are perhaps no cases which are a source of such great anxiety to the general physician and to the obstetrician as those in which an attack of appendicitis complicates pregnancy. The difficulties in deciding whether an operation should be undertaken or not may be very great, and the operation itself may present exceptionally grave dangers to the patient. Here, again, there are many questions concerned with the treatment of such cases to which it is extremely difficult to give a correct answer and upon which a collective investigation might throw much light. The influence of the attack upon the pregnancy and *vice versâ*, the likelihood of suppuration occurring, the danger to the fœtus, and the question as to whether a recent attack of appendicitis should be any bar to marriage are only some of the questions to which a certain answer may be very difficult to give. The balance of evidence seems to show that an attack of appendicitis during pregnancy is likely to be severe and that an early operation is usually indicated. In connexion with the relation of certain of the acute fevers to pregnancy a large number of most interesting problems present themselves for solution, more especially with regard to the transmission of such conditions to the fœtus. A large number of observations have been carried out in relation to enteric fever, notably by Dr.

FRENCH himself working in conjunction with Mr. H. T. HICKS. This variety of an acute specific fever is of special importance because it furnishes an example of a natural experiment in human beings upon the simultaneous placental transmission both of chemical substances, such as agglutinins, and of bacteria—viz., the typhoid bacilli. These organisms have been demonstrated in the fœtal tissues and Widal's reaction has been obtained with the fœtal blood. Whether the fœtus manufactures its own agglutinins or not is a problem awaiting solution, as are also the many questions concerned with the immunity of the fœtus to the disease from which the mother is suffering. It seems that the so-called barrier action of the placenta, by which it exercises a selective power on the substances which it allows to pass into the fœtal circulation, can become impaired when the mother is in poor health, and in these circumstances not only chemical substances in solution but also concrete bodies such as bacteria may gain access to the child. There are other possibilities of injury being caused to the child who, even if escaping enteric fever when the mother has acquired the disease during her pregnancy, may suffer in other ways after birth as he or she grows up. Such a possibility is of necessity exceedingly difficult to prove, though it has been said, we know not with what truth, that enteric fever in the mother may be the cause of intellectual peculiarities in the offspring years later. A perusal of these lectures only demonstrates very clearly how great is our ignorance of many of these matters and what a large amount of work is necessary in this branch of medicine before we can hope to be in a position to answer all the questions which arise. It is especially men in general practice, who are able to follow family histories over many years, who are in a position to assist in the acquisition of such knowledge and we should welcome gladly any attempt to carry out such a collective investigation as is suggested by Dr. FRENCH. The very excellent summary of our knowledge contained in these valuable lectures will serve to show the lacunæ in that knowledge which exist and the directions in which further investigation is required. They cannot fail in the meantime to be of very great help to all those who are constantly meeting with cases of general diseases occurring in pregnant women, and it was a happy thought of Dr. FRENCH to devote his lectures to this comparatively neglected branch of medicine.

Compulsory Instruction in the Use of Anæsthetics.

FEW discoveries, if any, have changed the aspects of medicine and surgery as much as that of anæsthesia. The widening of the range of practicable surgery and the possibility of rendering patients insensible not only to the knife but to careful examination as an aid to diagnosis have made the administration of anæsthetics an everyday occurrence in the life of most medical men. Nearly all discoveries in medicine have been the gradual outcome of years of thought and so have taken their place naturally in the curriculum of the medical schools, but in the case of anæsthesia this has not been so. Those who introduced it were perhaps unaware of its wide-reaching possibilities and hardly recognised that while its uses were benign its employment involved the greatest care, needed no small amount of physiological knowledge, and required expertness in manipulation. Although such men as SNOW, CLAUDE BERNARD, and PAUL BERT appreciated these things the medical profession and the public made no special provision either for the education of students in the use of, or the safeguarding of the employment of, drugs which involved the issues of life and death. Instruction in the administration of anæsthetics up to a few years ago can be characterised only as haphazard; many medical men commenced practice without any practical knowledge and experience of anæsthetics. From time to time efforts have been made to remedy this. Some teachers attached to general hospitals in London urged the necessity of including definite instruction in anæsthetics as a concomitant part of the curriculum and petitioned the Royal Colleges of Physicians of London and of Surgeons of England to insist upon evidence of the definite instruction of candidates before their admission to the final examination. The Society of Anæsthetists moved in a similar manner and the London Colleges at once recognised the importance of the matter and required the production from their examinees of a proof of instruction in the processes of anæsthesia. The evils of inefficient teaching and the absence of any penal enactment protecting the public from incompetent persons employing lethal drugs to produce anæsthesia were not wholly removed by these steps even if they were remedied in part, for the Conjoint Board of the Royal Colleges does not control all students. In our columns and elsewhere have appeared strongly worded protests against the unsatisfactory state of the law as regards the employment of anæsthetics, and at a recent meeting of the Medico-Legal Society the question has been considered in many of its bearings upon the initiative of Dr. F. W. HEWITT.[1]

We understand that the following resolution has been sent to the General Medical Council from the Medico-Legal Society, having been proposed by Dr. HEWITT, seconded by Mr. R. HENSLOWE WELLINGTON, and passed by the members unanimously:—

That in view of the importance of the administration of anæsthetics this society is of opinion that it is highly desirable in the public interest that every member of the medical profession before he is registered shall have received instruction in the administration of anæsthetics. It therefore earnestly begs the General Medical Council to consider whether they can see their way to include a course of instruction in anæsthetics amongst their "requirements in regard to professional education."

The General Medical Council, of course, has no control over the licensing bodies so far as regulation of the curricula is concerned unless it invokes the aid of the Privy Council and is able to demonstrate that the course of instruction or system of examination is inadequate. Some two years ago the General Medical Council issued a recommendation to the licensing corporations that the subject of anæsthesia should be included in the curriculum but the result has been disappointing. The Conjoint Board of Examination of the Royal College of Physicians of London and the Royal College of Surgeons of England and the Society of Apothecaries of London require candidates to produce

[1] THE LANCET, April 4th, 1908, p. 1008.

certificates of instruction in practical anæsthesia which have to be signed by authorised teachers. Neither the Universities nor the other Colleges have responded. The University of St. Andrews, however, provides lectures and practical instruction in the use of anæsthetics and each student is "expected" to obtain instruction before presenting himself for his final examination. The Universities of Edinburgh and Aberdeen offer instruction, and in the course of surgical lectures given in the University of Glasgow anæsthesia is specially mentioned as finding a place. All practical teachers recognise, however, that when subjects which lie outside the routine track of study are not made compulsory by the examining bodies students either ignore them or at best are satisfied with a dangerously superficial acquaintance. The intelligent student may be fired by the enthusiasm of a thoughtful teacher but it is not so much for this type of man that we have to provide as for the average candidate whose ambition soars to no heights above a "pass." The *deus ex machinâ* of the present situation is the Privy Council, and accordingly the Medico-Legal Society has supplemented its petition to the General Medical Council by one addressed to the Privy Council itself. It urges—

That as the administration of any drug or drugs with the object of producing generalised insensibility to pain or actual unconsciousness for any medical or surgical purpose, or during child-birth, cannot be safely undertaken without medical knowledge and skill, your petitioners humbly pray that legislation be granted whereby the administration of any drug or drugs with either of the aforesaid objects by any person other than a duly registered medical practitioner or someone acting immediately under his supervision, direction, and instruction be made a penal offence.

It is to be hoped that the General Medical Council may in its wisdom recommend to the Privy Council both the necessity for general and compulsory instruction in anæsthesia and the penalising of offences such as those included in the petition given above. It is perhaps a pity that the wording as adopted would not protect the public against the frequent practice at the present time of inexperienced persons injecting cocaine and kindred preparations. Any suggested increase in the compulsory curriculum is usually met by the comment that the student is already over-burdened, but in the case of anæsthetics we feel that the contention ought not to be allowed. Medical practitioners are compelled to give anæsthetics and to accept the responsibility attached thereto, the public cannot discriminate between those who have gained experience and those who do not possess any knowledge of anæsthetics, and so some means must be taken to safeguard alike those who administer and those who submit to anæsthetics. We are in full sympathy with those who are striving to effect the reform, but it is the examining and licensing bodies which ought to take the initiative and we trust that when the matter is brought before them they will do so. "Recommendations" and "requirements" can only take effect when they appeal to willing ears. Is it too much to ask those who are responsible to recast the schedules and to compel all their examinees to prove themselves at least competent in their knowledge of giving anæsthetics? We hope not.

Annotations.

"Ne quid nimis."

KING EDWARD'S HOSPITAL FUND FOR LONDON: THE MUNIFICENCE OF LORD MOUNT-STEPHEN.

LORD MOUNT-STEPHEN, with the munificence by which his charitable deeds are always marked, has transferred to the credit of King Edward's Hospital Fund for London 5000 Great Northern Railway Company (United States) shares. The gift is intended as an addition to its invested capital, and the annual income from the shares, about £7000, will make up Lord Mount-Stephen's total contribution to the Fund to a little over £30,000 a year, raising the total income of the Fund from investments to nearly £60,000 a year. In the letter to His Royal Highness the Prince of Wales announcing the gift Lord Mount-Stephen says :—

It has occurred to me that Your Royal Highness might persuade a few of the friends of the Fund to unite in raising the further capital sum required (say £300,000) to increase its income from investments to £75,000 a year. If this were accomplished I confidently believe that King Edward's Hospital Fund would then, with its subscriptions and income from other sources, be in a position to distribute not less than £150,000 a year among the London hospitals. I need not say what a great pleasure it would be to me to see the Fund permanently secured in that position, which, it should not be forgotten, is the position contemplated by the King when His Majesty founded the Fund more than ten years ago.

The wise man of affairs appears in the closing phrase of the letter :—

Permit me to add [he writes] that I hope when the finance committee decide on changing any of the securities in which my contributions are at present invested, they will not be tempted to reinvest in what are called "trustee securities."

The number of wards who must be wishing that their trustees and guardians had possessed any discretion in the matter is now very large, and Lord Mount-Stephen's view that the present position of "trustee securities" is not likely to improve is a valuable hint to the public from one who knows what he is talking about. The previous gifts of Lord Mount-Stephen to King Edward's Fund were £200,000 in 1902 and the same sum in 1905.

THE MEDICAL INSPECTION OF SCHOOL CHILDREN IN THE MAKING.

THE immediate outlook as regards the medical inspection of those who will some day be the mothers, fathers, soldiers and sailors of our nation depends very materially upon the lead which the large towns give in the matter of organisation and staff, and in this connexion a report recently published by Dr. P. Boobbyer, the medical officer of health of Nottingham, upon the arrangements to be made in that town deserves special notice, since in that city we are dealing with a population of some 250,000 and the examination of about 15,000 children annually. Dr. Boobbyer's report brings out clearly, although perhaps quite unintentionally, the fact that, at any rate in the case of Nottingham, the proposed medical inspection is but an extension of the work which has been carried on for some years in a somewhat different direction and degree, and it therefore incidentally emphasises the wisdom of the Board of Education in utilising the existing health service for this new work rather than creating a new machinery *ad hoc* with endless reduplication and obvious friction. In the past Dr. Boobbyer has carried out school inspection by himself aided by two lady health visitors and assisted at times by other medical men. During 1907 upwards of 3000 visits

were paid to the homes of children and over 800 to the schools, such inspections having reference in the main to the control of infectious diseases, including the taking of swabs from the throats of children during outbreaks of diphtheria. Recently, more than 1000 swabs from children attending certain schools were examined during one week. It has not, we are told, been difficult to induce parents to seek medical advice when their children were suffering from what are regarded as serious infectious diseases but in the case of what are ranked as relatively minor ailments, such as whooping-cough, impetigo, and ringworm, the suggestion to seek medical advice is frequently disregarded. In future, however, Dr. Boobbyer intends to exclude verminous children from school and to hold the parents responsible. This is, we think, a wise course as tending gradually to make parents ashamed to send their children to school in an uncleanly state. With reference to the carrying out of duties under the Education (Administrative Provisions) Act, 1907, and the recent memorandum of the Board of Education thereon it is estimated that in Nottingham these duties will involve the examination of from 7000 to 8000 new children annually and that with the inspection of those who are leaving school a daily examination of about 75 children will be necessary. The preliminary examination will take place in the schools but as regards the more detailed examination of those children who are obviously not normal Dr. Boobbyer makes the suggestion that four houses furnished with baths and other necessary conveniences should be rented in different parts of the city. In these houses there should take place not only careful detailed examination but also in some degree the treatment of sickness and abnormality. In order to carry out this programme it is thought that the appointment of one male and one female medical assistant, as well as of two additional health visitors, will be necessary. The town, it is proposed, should be divided into four inspecting districts, each health visitor being the responsible intermediary between the school, the medical inspector, and the home in her own district. It is in this fashion that Dr. Boobbyer hopes to make the best use of his health visitors. He considers that eventually the addition of more medical experts will be required, but he is content in the first instance to accept the staff referred to as a nucleus. The suggestion as regards the establishment of health clinics in each quarter of the town, presided over by a resident health visitor, is, we believe, quite original and we shall watch with interest the result of the experiment. We trust, however, that Dr. Boobbyer has not in contemplation some elaborate scheme for the establishment of children's hospitals in all parts of the town and we hope that by the word "treatment" he is thinking alone of certain minor ailments, such as ringworm, which except for the machinery which he suggests would not improbably go entirely untreated.

HONEY.

HONEY is one of the most variable of food materials. When pure it is derived solely from the sweet fluid collected from the nectaries of flowers and further elaborated by the honey-bee. But bees often fill their cells with other substances than the nectar of flowers, as molasses, honeydew, or the juices of fruits; indeed, they almost always gather varying amounts of the exudations of plants other than nectar. Chemically considered, the ideal honey is a concentrated solution of invert sugar—i.e., of dextrose and lævulose in equal proportions, with traces of formic acid, nitrogenous bodies, dextrin, and other organic substances. Owing to the presence of impurities so generally introduced by the bees much difficulty is found in attempting to set up a suitable standard of purity for honey as found in commerce. The difficulty is increased by the common practice of artificially feeding bees and by the addition of adulterants. The historical and literary associations of honey and its value as a food and a medicine lend interest to an important investigation into its composition and analysis that has recently been undertaken by Mr. C. A. Browne and Mr. W. J. Young, of the United States Department of Agriculture.[1] At the present time the chief adulterants of honey are cane sugar, starch-syrup or commercial glucose, and invert sugar. It is interesting to note that bees readily feed upon cane sugar but they often refuse to take glucose syrup. The latter adulterant is added to natural honey for the double purpose of cheapening the product and preventing crystallisation. The nectar of flowers contains from 70 to 80 per cent. of water, but honey contains only about 20 per cent. The reduction is effected partly by the bees exposing the nectar in thin layers to the action of a current of air produced by the fanning of their wings and partly by a process of regurgitation, the nectar being continually thrown out from the honey-sac on the partially doubled tongue and then drawn in again until, by the movement of the air and the heat of the hive, the nectar is sufficiently concentrated to be deposited in the cells of the comb. Another change of considerable importance, which takes place while the nectar is in the honey-sac of the bee and also probably during evaporation and storage in the comb, is the conversion of over 85 per cent. of the sucrose originally present in the nectar through the action of an enzyme secreted by the bee. The nectar is further modified by the bee by the introduction of a minute quantity of formic acid which is not present in the original nectar. This acid is supposed to act as a preservative and to prevent fermentation. The Bulletin deals very fully with the chemical investigation of honey and concludes with an interesting chapter on the microscopical examination of honey. It is shown that the genuineness or otherwise of a sample of honey may be indicated by the number of pollen grains present. By counting the number of pollen grains present it is possible to ascertain approximately the amount of glucose or other adulterant that may have been added. A careful study of the size, shape, and markings of the pollen grains of different flowers enables the analyst to determine the genus, and frequently the species, of the flowers from which the honey was collected. In this way the statements on the label regarding the source of a given sample of honey—e.g., "heather honey"—can be verified.

THE DEVELOPMENT OF MEDICINE IN RUSSIA.

THE council of the Society of Russian Physicians in Memory of Pirogoff, on the initiative of L. V. Burtenson, has undertaken the organisation of an all-Russian League for the fight against consumption, and proposes to call at an early date a congress of representatives of all the anti-consumption institutions existing in Russia in order to prepare the statutes of the league and to appoint its representatives to form part of the International League for the Prevention of Consumption. Public health is a subject of increasing interest, not only as regards consumption but other diseases, and especial attention is being paid to the effects of alcohol. The council of the Russian Society for the Preservation of the Public Health announces a competition for two prizes for the best treatises on the action of ethyl alcohol, vodka, wine, and other alcoholic drinks on the human organism. The prizes will be £200 and £100 respectively. The last day for receiving articles is May 1st (14th), 1910. They may be written in the Russian, French, or German language. The ethics of advertising have lately exercised the minds of many of the dentists in the chief cities and at the inauguration of the new St. Petersburg Odontological Society on April 11th there was much discussion over the question of

[1] Bulletin No. 110, Bureau of Chemistry, United States Department of Agriculture, p. 93 (1908).

advertising and all present resolved to discontinue advertising and to confine their signs to small sign-boards. The question as to how far operations may be legally carried by surgeons is made topical by the case of the director of the women's private hospital, Dr. Korabevitch who for the second time has been brought before the criminal courts because of his "daring operations" and the inquiry promises to last some time. His counsel wishes to have him examined by alienists. Thus, says the *Novoe Vremya*, "psychiatry may become enriched by a quite new form of madness."

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the Fellows of the Royal College of Surgeons of England will be held at the College on Thursday, July 2nd next, at 3 o'clock P.M., for the election of four Fellows into the Council of the College in the vacancies occasioned by the retirement in rotation of Mr. J. Ward Cousins, Mr. A. Pearce Gould, and Mr. W. Harrison Cripps, and by the resignation of Mr. F. Howard Marsh. Forms of the requisite notice from a candidate and of his nomination may be obtained on application to the Secretary, and the same must be received by him duly filled up not later than Monday, June 8th next. Voting papers are sent by post to all Fellows whose addresses in the United Kingdom are registered at the College and Fellows are not required to apply for voting papers. We understand that Mr. W. Arbuthnot Lane, Mr. W. D. Spanton, and Mr. J. Lynn Thomas intend to offer themselves as candidates for election.

THE PATHOLOGY OF THE PARATHYROID GLANDS.

IN THE LANCET we have already noticed a paper by Dr. David Forsyth on the Function of the Parathyroid Glands,[1] and in the April number of the *Quarterly Journal of Medicine* Dr. Forsyth has continued the subject by writing on their pathology. The scope of the paper has been intentionally restricted by the exclusion of all contributions which omit to support their contentions by evidence from necropsies or operations. Many abnormalities and pathological conditions are found. The glands may be absent or they may be more numerous than usual; various degenerations have been seen; in five cases new growths have been found. Some colloid material is of frequent occurrence and in all probability it is physiological, but Welsh considers it pathological, in spite of the fact that it occurs in a large proportion of healthy individuals. When the colloid material collects into large distinct cysts the condition may be looked upon as pathological. The next section considers the condition of the parathyroid glands in certain diseases. It is shown that pathological changes in the glands are fairly common, but these changes may occur without producing any clinical symptoms resembling those ascribed to ablation of the parathyroids in animals. The recorded observations suggest that the glands have little to do even with those diseases with which they have been most freely associated by many writers. Pepere and Zanfrognini believed that the absence of one or two parathyroids was responsible for the occurrence of eclampsia, but this view is untenable, for the same numerical deficiency may be found in women who have borne children and yet have had no eclampsia, and, moreover, hypertrophy of the remaining parathyroids should have occurred. Carnot and Delion described a case of a woman in whom one parathyroid was tuberculous, and for eight hours preceding death convulsions occurred which they ascribed to parathyroid insufficiency, but extensive tuberculous disease was present in other organs and even the kidneys were affected, so the case is more than doubtful. The suggestion that eclampsia, paralysis agitans, tetany, or epilepsy is dependent on disease of the parathyroids is not at present founded on pathological observations, and so far as the evidence goes in the first three diseases the glands are unchanged and even in epilepsy post-mortem examinations have not proved that the condition is produced by disease of the parathyroid. Dr. Forsyth concludes that observations on the morbid states of the parathyroid are not yet sufficiently numerous or concordant to justify the opinion that the glands bear a pathological relationship to any known disease.

[1] THE LANCET, Feb. 29th, 1908, p. 659.

THE GUARDIANS OF THE POOR AND TUBERCULOSIS.

ON May 14th a conference was held in Dudley for the purpose of considering generally the subject of tuberculosis and the desirability of boards of guardians taking joint action in the provision of special accommodation for the treatment of consumption. Representatives of ten boards of guardians were present—Bromsgrove, Cannock, Dudley, Droitwitch, Kidderminster, King's Norton, Stourbridge, Walsall, West Bromwich, and Wolverhampton. Considerable differences of opinion were expressed regarding the best methods of treating tuberculous patients, but the general idea seemed to be that workhouses in any case were not proper places and successful results could not be expected, even if special parts were set aside for treating cases of tuberculosis. Ultimately the meeting decided that further information should be obtained from the various unions represented with regard to the number of cases of pulmonary tuberculosis amongst both indoor and outdoor paupers, the provision already made for treatment, the sites available for sanatoriums, and the opinions of the respective boards concerning the action to be taken. A committee representing the various unions was appointed to take such further action as might be necessary.

ENTERIC FEVER SPREAD BY A 'BACILLUS CARRIER" 16 YEARS AFTER SUFFERING FROM THE DISEASE.

THE importance of "typhoid carriers"—i.e., persons who harbour the bacillus for more or less prolonged periods after recovery from the disease—is a matter to which we have on several occasions recently drawn attention in our columns.[1] An example of an epidemic which has been proved to be due to the agency of such a case is that to which reference was made in an answer to a question addressed in Parliament to the Secretary for Scotland last week. In his reply Mr. Sinclair stated that the recent epidemic in Kelvinside, Glasgow, had been traced to a woman employed on a farm from which some of the milk supplied to that part of Glasgow was derived. This woman, who suffered from enteric fever 16 years ago, has been proved to be a "carrier" and to be the cause of the present epidemic. At a discussion held on the subject of "typhoid carriers" at the Epidemiological Section of the Royal Society of Medicine on March 27th, Dr. D. S. Davies and Dr. I. Walker Hall gave some interesting details of two outbreaks traced to the same "carrier," being the first outbreaks of the kind investigated in this country, although others have since been recorded. The attention which these "carrier" cases has received is, in the first instance, due to Kayser and Klinger who have published interesting observations on this subject in the reports of the Imperial German Board of Health. That the bacillus typhosus may persist in the body for prolonged periods has been known for some time, and the occurrence of typhoid bacilli in the gall-bladder and in gall-stones is well known. They have been found by von Dungern in pure culture in the gall-bladder 14½ years after the attack of enteric fever. Dr. G. Dean has recently

[1] THE LANCET, Jan. 25th, p. 247, and March 7th, 1908, p. 732.

published a case in which bacilli were passed 29 years after the attack. It is estimated that about 4 per cent. of patients who have suffered from enteric fever become chronic "carriers," and it is generally supposed that the bacilli grow in the bile in the gall-bladder and smaller bile-ducts, and that they are intermittently discharged into the intestine and passed with the fæces. Dr. Davies and Dr. Hall found out that these "carriers" often present intervals during which they are "ineffective"—i.e., do not lead to infection—and that their periods of effectiveness correspond roughly to the seasonal incidence of enteric fever. There are many important points that require solution in regard to these cases, more especially in relation to prophylaxis and treatment, since at present little is known as to any effective means of destroying the bacilli within the body. The attitude of the health authorities to cases of enteric fever after convalescence is one that will require careful consideration in the near future. In regard to the epidemic at Glasgow the authorities appear to have investigated the conditions most thoroughly and to have acted with commendable promptitude.

HIDDEN DANGERS IN THE DISPENSARY.

MOST members of the medical profession will be surprised to learn that in the great Jamaica earthquake case, which recently occupied the attention of the court and jury for no less than 23 days, much evidence was adduced as to the existence of hidden dangers in a medical man's dispensary. To allay any feeling of alarm which this statement may excite, we hasten to say that the hidden dangers in question can only become revealed by an earthquake, but according to the evidence they are there all the same. The way in which the point arose may be explained in a few words. The plaintiffs' premises at Kingston, Jamaica, were destroyed by fire on Jan. 14th, 1907—the day of the great earthquake which devastated the city. The question was, How did the fire originate? It was common ground that it did not start in the plaintiffs' premises, but it came from a building which was partly occupied as a private residence and partly as a medical practitioner's dispensary or consulting room. The plaintiffs made a claim under their insurance policies, but the company refused to pay on the ground that the fire was caused by the earthquake. The case for the company was that the fire began in the medical man's consulting room. It was proved that just before the earthquake the medical man was sterilising some instruments in a vessel heated by a Bunsen burner, and it was suggested that the upsetting of this burner by a very severe earthquake shock would have been sufficient to set the whole place alight. As there was some doubt, however, whether the burner was alight just before the shock, another theory was advanced on the part of the company. It was alleged that the fire might have been due to a kind of spontaneous combustion due to the intermixing of certain chemicals which the medical man had in bottles on his shelves. Amongst other things he had chlorate of potassium and strong nitric acid. Experiments actually tried before the jury in court demonstrated the elementary fact that these substances when mixed together in the presence of an inflammable liquid, such as tincture of orange, would cause a conflagration. It was also shown that permanganate of potassium and glycerine coming into contact react with such violence that flame is produced. Whether any of these experiments were actually performed by the earthquake, no one could say, as there was no one in the room at the time. The jury, who found that the fire in question was due to other causes, apparently rejected the chemical theory. But who shall say that it was an impossible cause of fire? We are not aware that companies who insure property in England charge an extra premium in respect of the consulting room or dispensary, and having regard to the fact that an earthquake shock in these islands is a very remote possibility, we do not anticipate that the disclosure of these facts will cause any amendment of the common form of policy.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE local secretaries for the Dublin meeting of the British Association for the Advancement of Science ask us to call the attention of officers of the association and members who intend to be present to the urgent necessity of filling up and returning forthwith the postcard sent out with the invitation circular. Many have already done so, but the work of the hospitality subcommittee, which has to be completed months beforehand and which everybody knows requires delicate and careful treatment, is now at a standstill owing to the fact that information has not been received from a large number of the prominent members of the association as to whether they will be accompanied by lady members of their families or not. This information is asked for on the card referred to, which is the only source the local committee has to rely upon.

URBAN MORTALITY IN SCOTLAND.

WE lately called attention to the marked excess of urban mortality in Ireland compared with that prevailing in the 76 large towns in England and Wales.[1] The Annual Supplement recently issued by the Registrar-General for Scotland affords the means for comparing the rates of mortality of the principal urban populations in that portion of the United Kingdom with the rates in the principal town populations of England and Wales and of Ireland. The estimated population of the eight principal Scotch towns in the middle of 1907 was equal to 1,812,171, and ranged from 847,584 in Glasgow to 34,866 in Perth. The crude or uncorrected death-rate last year, which did not exceed 15·4 per 1000 in the 76 largest English towns, averaged 17·5 in the eight Scotch towns, while the mean rate in the 22 largest town districts in Ireland was 21·1 per 1000. Thus, compared with the mean rate in the English towns, the death-rate last year in the eight Scotch towns was higher by 2·1 per 1000, showing an excess of mortality equal to 13·6 per cent. In the several Scotch towns the crude death-rate in 1907 ranged from 14·3 and 16·1 per 1000 in Aberdeen and Paisley to 18·5 in Glasgow and 19·1 in Dundee. The Scotch Supplement points out that, after correction of the rates in these towns, for variations in age and sex constitution of the several populations, the highest rates are still shown in Glasgow and Dundee—namely, 20·5 and 20·1 respectively, and the lowest rates in Aberdeen and Paisley. This excess of mortality in the Scotch towns compared with that in the English towns has been more or less constant for many years. During the last five years (1903–07) the annual rate in the eight Scotch towns has, for instance, averaged 17·6 per 1000, against 16·1 in the English towns during the same period. It should, however, be pointed out that the rate of mortality in these eight Scotch towns, although still distinctly exceeding the mean rate in the English towns, has shown a very marked decline from the rates that prevailed in past years. During the five years 1871–75 the annual rate of mortality in these Scotch towns averaged no less than 28·0 per 1000, since which the rate has very steadily declined, and during the last five years, 1903–07, has not exceeded 17·6 per 1000, as noted above. The statistics in the Scotch Supplement under notice do not afford the means for a full and satisfactory explanation of

[1] THE LANCET, April 25th, 1908, p. 1222.

the still excessive mortality in the principal urban populations in Scotland. The rate of infant mortality in the Scotch towns last year was almost identical with that in the English towns; the deaths under one year of age in the Scotch towns being equal to 128 per 1000 of the registered births, while in the English towns the proportion was 127 per 1000. The death-rate among children under five years of age, per 1000 estimated to be living at those ages, showed a very wide range among the eight Scotch towns; the lowest rates were 37·8 and 40·0 in Aberdeen and Perth, while they were equal to 57·2 in Glasgow and 60·8 in Dundee. The deaths from the principal epidemic diseases in the Scotch towns (excluding 1018 from cerebro-spinal fever and 185 from influenza, which are not so classed in the English returns) were equal to a rate of 1·48 per 1000, against 1·54 from the same diseases in the 76 English towns. It should, however, be noted that the 1018 deaths referred to cerebro-spinal fever in the Scotch towns last year were equal to a rate of 0·56 per 1000, and included 711 in Glasgow, 148 in Edinburgh, and 86 in Leith. The excess of urban mortality in the Scotch towns does not therefore appear to be mainly due either to excessive infant mortality or to marked excess of mortality from epidemic diseases. A satisfactory explanation of this excess, moreover, could only be obtained by a full and detailed analysis of the causes of death and of the ages at which they occur. Few now venture to deny the constant relation between the death-rate and the health condition of a population, or between the health condition of a population and the efficient action of its sanitary authority. The excess, therefore, of the urban death-rates in Scotland and Ireland compared with that in England and Wales raises the important and interesting question as to the precise defects of sanitary organisation or administration in Scotland and Ireland to which this excess of mortality may fairly be attributed.

SUBINFECTION.

IN the *Queen's Medical Quarterly* for January Professor J. G. Adami of McGill University has published an important and even revolutionary paper in which he introduces into pathology a new conception—subinfection. Pasteur laid down that the normal tissues are devoid of bacteria—a postulate on which the science of bacteriology and its great application the antiseptic system are based. Professor Adami asks, Is this the whole truth or only a half truth? The postulate must be very near the truth, for otherwise the marvellous results of the antiseptic system cannot be explained. Nevertheless, cases occur which are difficult to explain except on the assumption that there are exceptions to the rule. An injury of an internal organ—a joint for example, in a healthy individual without wound or abrasion may be followed by local infection. How could the microbes reach the injured area unless they were previously in the tissues? It may be said that such individuals are not normal and that there exists in the digestive or other mucous membrane an ulcer or abrasion through which bacteria have gained entrance. But this is unproved. As an alternative explanation Professor Adami suggests that the normal tissues are not actually sterile but only potentially sterile, that constantly throughout life bacteria, pathogenic and non-pathogenic, enter the blood and lymph and are conveyed to the tissues and are destroyed by the various bactericidal agencies of the organism. He thinks that infection occurs when the number brought to one focus is excessive or when the resisting powers of the tissues are locally diminished. In support of this view he brings forward the following evidence. Stained sections of most of the tissues of normal animals show no clear evidence of the presence of bacteria, but in certain organs they can be detected with a remarkable frequency. This was pointed out 20 years ago by the Italian pathologist Bizzozero and has been abundantly confirmed by Ribbert, Ruffer, Nicholls, and others. In the lymph nodules of the tonsils, the mesentery, and the neighbourhood of the bifurcation of the trachea, among a large number of small granules taking the same stain as bacteria, a certain proportion of perfectly formed bacteria are encountered. It appears that bacteria are conveyed to the lymph nodes in fair quantities and then destroyed, but that at the moment of death those which have recently arrived are intact. Another method of investigation is by cultures made from the healthy tissues. The evidence afforded by this method is contradictory. After a careful study of the articles of those who have obtained negative results Professor Adami concludes that their methods were faulty. He gives the case of typhoid spots as an illustration of his meaning. Observer after observer attempted to make cultures from these spots with negative results. Then Richardson of Boston, U.S.A., showed that if a rose spot be frozen with ethyl chloride spray and cultures made from it typhoid bacilli can constantly be obtained. Previous observers neglected to take into account the bactericidal action of the blood which they removed from the rose spot. By freezing the blood is driven out from the vessels and the bacilli are preserved. Upon removal of tissues there appears to be an active liberation of bactericidal substances which are more abundant in the healthy than in persons the subject of active infection. The mere smearing upon solid media of the juice from healthy organs is bound to give ambiguous results. Positive results can be expected only when the bactericidal substances of the body are neutralised or so diluted by the use of abundant fluid culture media that they cease to be effective. Taking these precautions, Dr. W. W. Ford found in Professor Adami's laboratory that of 34 healthy animals (dogs, cats, rabbits, and guinea-pigs) 65 per cent. gave positive results in one or more organs. That this was not due to contamination was shown by the facts that each species had its own bacteriology and that each individual showed bacteriological peculiarities. How do these bacteria gain entrance through healthy surfaces? Professor Adami points out that in the mucus which bathes the human tonsils leucocytes containing a larger or smaller number of bacteria are constantly present. In sections of the fresh tonsil similar bacteria-bearing leucocytes can be found. Thus of the leucocytes which find their way out on the mucous surface and there act as scavengers some return to the tissues. Professor Adami concludes that the leucocytes transport bacteria through the mucous membranes and suggests that throughout life they are thus constantly training to destroy bacteria.

LAFCADIO HEARN'S MYOPIA.

Dr. Gould of Philadelphia has added yet another interesting contribution to the literature of genius and ill-health in his new volume "Concerning Lafcadio Hearn." Like Wagner and Flaubert, Whittier and Berlioz, whom Dr. Gould has already discussed, Hearn suffered from defective eyesight to such an extent that the whole universe appeared to him in blurred outline, and when he described objects he had to do so with the minute particularisation of a man using a magnifying glass. He had indeed only one eye, and that an enormously short-sighted one, so that when he used an eyeglass, which he did once in a way, he must have had the impression of viewing the world through a reversed opera-glass. He wisely preferred to do without glasses since they could be of so little service to him, and during his later life in Japan seems chiefly to have relied in his writings upon a well-stored memory and upon a vivid imagination. Hearn is, curiously enough, such a master of the charm of description as to have been called an English Pierre Loti—both are impressionists with a singular sense of colour and space. But while the Frenchman

has the keen eyes of the sailor, Lafcadio Hearn paints his delicate and gorgeous scenes from hearsay. His was indeed a dream life, which he seemed to prefer to the bleak commonplace of healthy vision. Viewing the whole world of letters wonder is excited as to what parts of it are, so to speak, subjects for pathological study. How much colour, how much mystery, how much vague grandeur, and again, how much decadence, mental obliquity, and lack of lucidity result from forms of myopia?

IN connexion with the *entente cordiale médicale* Dr. Raymond, of the Salpêtrière Hospital, Paris, will deliver an address in the large library of the Royal College of Physicians of London on Monday, June 22nd, at 5 P.M. The subject will be "Les Maladies dites Familiales (Sénescence Physiologique Prématurée Localisée à Certains Systèmes Organiques)." Members of the profession will be admitted on presenting their cards.

THE King has given to Mr. Marc Armand Ruffer, C.M.G., M.D., B.Ch. Oxon., President of the Egyptian Maritime Sanitary and Quarantine Council, His Majesty's Royal licence and authority to accept and to wear the insignia of Commander of the Order of the Crown of Italy, conferred upon him by His Majesty the King of Italy, in recognition of valuable services rendered by him.

WE have received from Dr. J. T. C. Nash, the late medical officer of health of Southend, who has recently and unanimously been elected medical officer of the county of Norfolk, a letter thanking the medical profession and the medical press for the manner in which he was supported during his singular quarrel with the Southend municipal authority.

Lord Cromer will preside at the inaugural meeting of the Research Defence Society, to be held at 20, Hanover-square, London, W., on Friday, June 19th, at 5 P.M.

MOTORING NOTES.

BY C. T. W. HIRSCH, M.R.C.S. ENG., L.R.C.P. LOND.

AS an example that the motor-car is now beyond the stage when it was considered but the toy of a few wealthy enthusiastic persons Lord Montagu of Beaulieu, in a paper recently read before the Royal Institution of Great Britain, states that from observations taken during February and March of this year he finds that the mechanical carriage already outnumbers the horse-drawn in many streets, especially in London, and those of the profession who have had cars will, I know, agree with Lord Montagu's conclusions—namely, that the car has not only come to stay but has also come to improve our country, to make our lives more comfortable, to assist all classes, and to help in the steady forward progress of mankind. There is no doubt that to a busy medical man a car is invaluable and since I have written on motor matters I have had many letters from colleagues asking about cars and especially about makes that have taken their individual fancy. A good many seem taken by the Argyll, a car made at Alexandria by Glasgow and on sale in London at Argyll Motors Limited, of 17, Newman-street, W. I had, of course, often heard of this make, and as so many wanted my opinion I accepted the invitation of a medical friend, who is the happy owner of one, and not only had a run but also carefully inspected the car and its mechanism. He had their 12-16 horse-power with side entrance Roi-des-Belges body, side doors to front seats and a Cape-cart hood and folding wind screen, the total length being 12 feet 4 inches, the advantage being that he could use it for his professional work as well as for holiday jaunts with his wife and family. The engine is a four-cylinder with inlet and exhaust valves on the same side. The ignition is by high tension coil and accumulator; he had not had a magneto fitted and had not had much, or in fact any, ignition trouble, still the makers do fit a magneto as an extra and I strongly advise this addition. The carburettor is automatic and is made so that fresh air may be admitted to the cylinders, thus permitting the engine to be used with special advantage as a brake, there being thus no vacuum and consequently no sucking in of oil with subsequent carbon deposit in the cylinders, and as the sparking-plugs are over the inlet valves the rush of the incoming gas prevents to a great extent any accumulation of soot or deposit, little points that go to save frequent cleansing of the plugs as well as pre-ignition and over-heating, one source of which is deposit in the cylinder that becomes incandescent and explodes the mixture prior to compression, as well as by expansion due to over-heating, hinders the admission of a full charge. Another feature which in the Argyll obviates this worry is the excellent cooling, a specially designed radiator, powerful pump, and fan being fitted. The clutch is of the multiple disc type and is certainly most sweet, permitting of enough slip on starting to obviate all jar, and though personally I have always been devoted to the leather-faced friction kind my drive gave me grounds for wavering in my allegiance to the old system. I was so impressed with the car that I thought I would like to know more of their special doctor's turnout, so I availed myself of an invitation which I had had from Messrs. Argyll's, Limited, London, and made use of their doctor's carriage for a morning's round, at the same time giving it a good test on some really bad hills. Certainly every point seems to have been considered to insure reliability, efficiency, and comfort. The body is inclosed for two occupants and is provided with a detachable wind screen of such construction that it may be partly opened and yet afford protection from rain. The seats are deep, roomy, and upholstered in good style. The change-speed levers are arranged inside so that the owner can be his own driver and still keep his gloves clean and dry, an advantage I can appreciate, as I do all my own driving, and as my levers are not so well placed my glove bill is heavy, or my hand coverings unfit to take into a patient's house. The doors are wide, so permitting easy access. There is also a seat at the back for the groom, which when not required can be folded into the well provided for it, thus leaving a convenient platform to carry luggage. Provision is also made for medicine cases and instrument boxes. Another feature of this model is that in a few minutes it can be converted into an open car, thus combining the advantages of both an open and a closed car.

As in my early motoring days I had a broken collar bone due to a defective brake drum, which fractured and fell off when I tried to put the band on it while descending Hog Trough Hill, near Brasted, I have made a rule to inspect carefully this vital part of a car, and I must say that on the Argyll great attention has been paid to the brakes. I gave both the foot and hand brakes a severe test on a very steep incline and found that either could be depended upon to hold the car, both backwards and forwards, instantly. The rear ones are of the internal type, two cast iron shoes, by an arrangement of rods and levers, being when needed expanded, and thus brought into contact with a steel drum, which is rigidly attached to the road wheels; a most simple and convenient hand adjustment is provided, so that there is no excuse if they are out of order. The foot-brake consists of a steel band working on a cast-iron drum fixed to the live axle, and as I have already said either held the car on a really bad hill—in fact, the one I tested them on had a gradient of nearly 1 in 5½—but in these as in all brakes the rocking spindles carrying the cams that cause the brake shoes to expand require occasional lubrication, and when casualties due to brake failure are investigated I honestly believe that the majority will be found to have been avoidable by proper attention to shoes, drums, bands, and the actuating parts including lubrication of the latter. On the Argyll everything in this way is so placed that it can be easily got at and seen to. The engine on their latest type has four separately cast cylinders, 90 m/m bore by 120 m/m stroke, the crank shaft has a bearing between each crank pin, and the bearings are of ample dimensions and lined with a special anti-friction metal. The inlet and exhaust valves are on opposite sides and mechanically operated and interchangeable, and the arrangement of the inlet and exhaust pipes affords the greatest possible accessibility to the valves. Where the extra magneto ignition is provided extra plugs are provided, so the two can be employed at one

time, which though I am told is a needless waste is, I believe, an advantage, as from experiments I am convinced that when the mixture is exploded in two places a more powerful explosion results. Lubrication is well carried out by a gear-driven pump, the size of the pipes is ample, and with occasional overlooking lubrication should be continuously consistent in its action. I was much taken with the easily seen oil-sight feeds fitted on the dash board. The gear-box gives three forward speeds, the first speed is the only one in connexion with which a sliding gear is used, the others are always in mesh, dog clutches being employed when either is needed to drive. The propeller shaft has a universal joint at each end and the torque rods lie practically in the same plane, so reducing to a minimum the sliding motion of the universal joint on the rear end of the propeller shaft and adding largely to the smooth running of the car, and I certainly noticed the absence of any jolts though we did go over some very rough roads.

As a result of my drive I am of opinion that the car is well suited for medical work, the only suggestions being extra magneto ignition and larger tyres than the 810 by 90 fitted; I think 810 by 100 preferable, and the change is no trouble as the 100 fit 90 rims. For medical use, too, I advocate non-skids on the back wheels.

Recently a somewhat novel non-skid device has been brought out by the Portman Garage of Portman-square, London, and if it proves a success it will be most useful for town cars, as, of course, non-skid tyres are more expensive than the ordinary round tread and wear out a little bit sooner. The arrangement consists of a strip of leather the two ends of which are suspended by springs from the frame of the car and the centre of the curve just touches the ground inside the wheel track of the hind wheels; here there is a projection of pieces of steel-studded leather that impinge towards the road wheel; directly a rear wheel tries to skid it is arrested by the leather and studs and so all sideway movement is stopped, or should be.

Doctors, I have heard say, are easily gulled, but so are other people as well I believe. From the report of a case tried in February at the Clerkenwell county court it seems that a country clergyman, the owner of a car, was in need of new tyres; he saw an advertisement of some firm in London and visited their establishment, where he purchased a pair of Palmer tyres, covered with non-skid leather bands, which he was given to understand were new, though the price was about half that of the makers. After a run of some 14 miles one of the tyres burst under the non-skid band, and on investigation they were found to be old and worn out; thus the action, which resulted in a verdict for the plaintiff for the amount claimed and costs. The moral is, I take it, not to be too sure that all cheap tyres are bargains. But, of course, though one firm may have deceived a customer there are doubtlessly many who deal in secondhand tyres who give good value, but personally I prefer paying more and having a reliable article, for unless one knows what one buys such bargains result more often in loss than gain.

When a really big motor smash takes place—not that that occurs frequently—it is very difficult to find out the cause, everything being so mixed up; probably a good many are due to the steering transmission rod bearings being worn and allowing the rod to drop down and all control over the steering wheels being so lost. It is a most unpleasant sensation when the driver realises that he is no longer in charge and that the car can and does go where it will; if the speed at the time was fast the insurance companies are lucky if they get off with merely one life and a broken-up car. It is therefore most important to make a rule to inspect the two half cup bearings that support the connecting rod, to see that they are lubricated and kept well adjusted up. Leather steering joint covers are made which not only serve to protect the parts but also if the bearing is worn help to keep the connecting rod in position. In addition, as the danger if the rod falls out is so great, a spring can be fixed on to the steering rod and attached to some portion of the car frame. This will anyway prevent an accident if the rod does become loose, but if the half cup bearings are regularly inspected and kept adjusted of course the rod cannot fall out. It is a good plan to have written up in the motor house "Some Golden Rules," and among the parts that must be put down for daily inspection and lubrication are certainly "the steering gear and steering rod connexions."

Mr. A. Duckham, of Phœnix Wharf, Millwall, London, writes to us under date May 5th: "In the 'Motoring Notes' which appeared in your issue of May 2nd my scheme of bonus payment to my mechanic is mentioned, and the writer goes on to say that he advocated being one's own driver, because it is more interesting and much cheaper. I should not like anybody to think that I am not my own driver—in fact, I think I may say that out of the 20,000 miles that I drive annually I drive 95 per cent. of the distance myself. Of course, my business engagements do not allow me time to attend to adjustments, &c., myself, and hence my scheme of rewarding the care—or rather, perhaps, of punishing the lack of it—shown by my man. This relegation of work to him is not because I am a 'kid-glove driver,' there being nothing that I enjoy so much as an afternoon's work tuning up a car. I rather doubt whether the business man appreciates the wonderful help that a car is to him, and the sooner he follows the doctor's lead the better. As an example, yesterday I drove from Blackheath to Derby, called at a place off the road on the way and arrived in Derby at 11 o'clock. From there I made a business call at Coventry and another at Rugby, and reached home in the evening after having covered altogether over 310 miles in the day, and not feeling the least tired.

"This business view of a car will probably not interest a medical man but I consider it a remarkable thing that since I have taken to motoring I have entirely lost my nasal catarrh, which I considered to be chronic, and further, I used to be subject to headaches, and motoring seems to have entirely conquered these. I seldom wear goggles and my eyes have become hardened to the wind, and very largely to the presence of flies and dust, so that when I get a particle in my eye it is quite an exception for me to trouble about it at all, although, of course, if it be an exceptionally large insect I have to take steps to remove it. Again, I drive a good deal at night in order to sleep at home rather than at an hotel and I am quite sure that in this way my seeing powers in the dark have greatly improved."

LYNN THOMAS AND SKYRME FUND.

THE following subscriptions have been received between May 16th and May 22nd by Mr. William Sheen, M.S. Lond., F.R.C.S. Eng. (2, St. Andrew's-crescent, Cardiff), honorary secretary to the fund.

Subscribers of Ten Guineas.

Glasgow Southern Medical Society, per James A. Aitken.

Subscriber of Three Guineas.

Bilton Pollard, London.

Subscribers of Two Guineas.

E. T. Collins, Cardiff.
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Subscribers of One Pound Six Shillings.

Glasgow Southern Division B.M.A. members, per John Stewart.

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Bournemouth Medical Society, per W. Silverwood Richardson, made up as follows:—

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John Fraser, Kilsyth, Nr. Glasgow.
J. N. Gardiner, Dunmow, Essex.

Looking Back.

FROM

THE LANCET, *SATURDAY*, May 29th, 1830.

ANOTHER DIVINE DOCTOR.

To the Editor of THE LANCET.

SIR,—Having seen a paragraph in one of the late numbers of THE LANCET, stating, that Dr. Charles Mansfield Clarke[1] is the only "living Doctor of divine origin," I take the liberty of informing you, that there is *another*. A gentleman in the first line of practice here has thus allowed himself to be *traves tied*. No doubt, Sir, you will recognise the individual, and may consider the fact worth a corner in your esteemed Journal.

I am, Sir, yours respectfully,

Scarbro', May 4, 1830. TYRO.

EXTRACTION OF A FIVE-FRANC PIECE FROM THE PHARYNX.

On the 15th of May, M. Dupuytren extracted from the pharynx of a young man a five-franc piece, which had been swallowed the day before, and had remained in the pharynx for twenty-four hours, in spite of various attempts to remove it. An emetic had produced frequent vomiting, but had not altered its position. It was lying almost in a transverse direction, at the lower portion of the pharynx, where it formed a slight prominence. A pair of curved forceps was introduced, but without any effect, except that of slightly turning the piece of money. Graefe's extractor (an elastic probe, terminating in a conic piece of silver half an inch in length and breadth, the basis of which is concave and turned upwards) was now, therefore, introduced, and the coin, without any difficulty, brought up into the mouth.—*Lanc. Franc.*

THE MEDICAL DEFENCE UNION.

THE annual general meeting of the Medical Defence Union was held in Liverpool on May 21st, at the Medical Institution.

Mr. STAMFORD FELCE, who took the chair, after referring feelingly to the loss which the Union had sustained by the death of Dr. Dreschfeld, spoke of the efficient services rendered to its members by its secretary and its solicitors. He called special attention to the large number of cases of threatened litigation against members which were stopped at once by the mere knowledge that the Union would defend —"action collapsed," as reported in the secretary's schedule of cases. He said further that the steps taken by the Union to stem the torrent of unqualified practice by raising actions for damages against quacks had been successful in several cases. Mr. Felce considered that greater protection could not be afforded to medical practitioners than that given by the Union, even if insurance companies took up the matter. It was suggested that some scheme could be adopted by which the whole risk of adverse verdicts and damages should be taken over, but after serious consideration it was decided that it was not possible, and further that it would be against public and professional polity and likely to lead to serious injury to the profession if not to actions for champerty and maintenance. Mr. Felce concluded by moving that the report be received, adopted, and entered upon the minutes.

This motion was seconded by Mr. F. W. LOWNDES and after several members had supported it was carried unanimously.

An election for three vacancies upon the council then took place and Mr. F. C. Larkin, F.R.C.S. Eng., was elected, and the two retiring members of the council, Mr. T. Gunton Alderton and Mr. M. A. Messiter, J.P., were re-elected.

The report once again indicates that there is no man, however high in the profession, who can safely say that he requires no assistance from such a society as this. As is pointed out in the report of the council, men who have been in practice for many years without needing help or advice have been compelled later to seek such aid against some unscrupulous patient when the very duration of their career might have been thought to militate against such necessity. As an illustration of the pecuniary value of work done for members and the price paid for such it may here be mentioned that over £1000 were paid out by the Union in defensive action for two members, jointly sued for alleged negligence, and that these members had actually paid in subscription to the Union the sum of £11 10*s.* in all. The solicitor to the Union, Mr. W. E. Hempson, in his report draws attention to the paramount necessity which exists of obtaining advice at the earliest possible moment upon any matter which arises and in which the assistance of the Union is likely to be required. By the observance of this principle the difficulties both of the Council and the legal adviser are minimised and the interests of the member himself are materially strengthened and benefited. During the last year 184 cases were placed in Mr. Hempson's hands. Of these, 52 related to libel and slander actions brought or defended on behalf of members in vindication of their professional honour and reputation, and 32 related to actions for malpraxis brought or threatened against members in which allegations of want of care and skill have been made. A peculiar action was that in which damages amounting to £50 were sought to be claimed from a member of the Union in the following circumstances. A child was taken by its mother to the member's house, who found it to be suffering from an infectious disease. He informed the mother that such was the case and warned her as to the consequences which might possibly ensue from exposing a child thus suffering in the public streets. It was alleged that the mother was pregnant and that, as a direct result of this information and warning, she was prematurely confined. The claim was not only seriously put forward but was actually carried into court, with the result that a verdict was given in the member's favour. Another interesting point to which attention is drawn is that the introduction of the x rays has operated as a factor in encouraging actions for malpraxis and the Union has had experience of this in many actions which it has defended in recent years. In the hands of the ignorant or uninitiated, skiagrams when taken and when seen by the patient form a dangerous element in encouraging litigation, and if no skiagram is taken the medical man is open to be proceeded against for having omitted to observe this precaution. The number of members on the register of the Union is 7477, and 589 new members were elected during the year. We may remind our readers that the offices of the Union are at 4, Trafalgar-square, London, W.C. The general secretary, Dr. A. G. Bateman, to whose indefatigable services the Union owes an immense debt of gratitude, is always willing to afford any information in regard to the society.

[1] Vide "Looking Back" in THE LANCET, March 3rd, 1906 (p. 608), and April 7th, 1906 (p. 978).

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 9190 births and 4093 deaths were registered during the week ending May 23rd. The annual rate of mortality in these towns, which had been equal to 15·7, 14·2, and 13·2 per 1000 in the three preceding weeks, was again so low as 13·2 during the week under notice. During the first eight weeks of the current quarter the annual death-rate in these towns has averaged only 14·9 per 1000, and in London during the same period the rate did not exceed 14·6. The lowest annual death-rates in the 76 towns during the week under notice were 2·9 in Burton-on-Trent, 3·7 in Aston Manor, 5·4 in Handsworth, and 6·2 in Hornsey; the rates in the other towns ranged upwards to 18·2 in Merthyr Tydfil, 18·6 in Middlesbrough, 18·7 in Swansea, 19·4 in Stockport, and 20·3 in Burnley. The death-rate in London during the week did not exceed 12·5 per 1000. The 4093 deaths in the 76 towns during the week showed a further decline of 26 from the low numbers in recent weeks, and included 336 which were referred to the principal epidemic diseases, against 381, 329, and 354 in the three preceding weeks; of these, 114 resulted from whooping-cough, 100 from measles, 42 from diarrhœa, 35 from scarlet fever, 31 from diphtheria, and 14 from "fever" (principally enteric), but not one from small-pox. The deaths from these epidemic diseases last week were equal to an annual rate of 1·1 per 1000, and corresponded

with the rate in each of the two preceding weeks; the rate from these diseases in London did not exceed 0·9 per 1000. No death from any of these epidemic diseases was registered last week in Northampton, Wigan, Aston Manor, Bournemouth, or in nine other smaller towns; the annual death-rates from these diseases ranged upwards, however, to 2·5 in Wolverhampton, 2·8 in Tynemouth, 3·1 in Stockport, and 3·3 in Rotherham. The fatal cases of whooping-cough in the 76 towns, which had been 99 and 121 in the two preceding weeks, declined again to 114 in the week under notice; this disease caused the highest death-rates, 1·5 per 1000 in Stockport and in Bootle, 1·6 in Rotherham, and 1·9 in Tynemouth. The 100 deaths from measles showed a further decline from the numbers in recent weeks, but caused death-rates equal to 1·1 in Salford and to 1·3 in West Ham and in Preston. The 42 deaths attributed to diarrhœa corresponded with the number in each of the two preceding weeks, and showed the greatest fatality in Blackburn and in York. The 35 fatal cases of scarlet fever exceeded the number in recent weeks, and were proportionally most numerous in Walsall and in St. Helens. Of the 31 deaths from diphtheria 10 were recorded in London and its suburban districts, two in Birmingham, three in Derby, three in Liverpool, and two in Manchester. Only 14 deaths in the 76 towns were referred to "fever" during the week, of which four occurred in Liverpool and two in London. The number of scarlet fever patients under treatment in the Metropolitan Asylums and London Fever Hospitals, which had been 2928, 2870, and 2838 in the three preceding weeks, had further declined to 2802 on May 23rd; 330 new cases were admitted to these hospitals during the week under notice, against 353 and 380 in the two preceding weeks. The deaths in London referred to pneumonia and to other diseases of the respiratory organs, which had steadily declined in the four preceding weeks from 301 to 198, fell further to 194 in the week under notice, and were 18 below the corrected average number in the corresponding week of the five years 1903–07. The 17 deaths directly referred to influenza in London also showed a further decline from recent weekly numbers. The causes of 24, or 0·6 per cent., of the deaths registered last week in the 76 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were again duly certified in London, Leeds, Bristol, West Ham, Bradford, and in 55 other smaller towns; in Sheffield, however, the causes of eight of the 100 deaths registered during the week were not certified.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been equal to 18·7, 17·3, and 15·3 per 1000 in the three preceding weeks, was 15·4 in the week ending May 23rd. During the first eight weeks of the current quarter the annual death-rate in these towns averaged 17·6 per 1000, and exceeded by no less than 2·7 the mean rate during the same period in the 76 large English towns. Among the eight Scotch towns the death-rate during the week under notice ranged from 12·1 and 13·1 in Paisley and in Greenock, to 15·9 in Edinburgh and 19·5 in Dundee. The 542 deaths in these eight towns exceeded by one the number returned in the previous week, and included 48 which were referred to the principal epidemic diseases, against 77 and 51 in the two previous weeks; of these 48 deaths, 12 resulted from diarrhœa, 11 from whooping-cough, nine from measles, eight from "fever," six from scarlet fever, and two from diphtheria, but not one from small-pox. These 48 deaths were equal to an annual rate of 1·4 per 1000, the mean rate from the same diseases in the 76 English towns during the same week being 1·1. The 11 deaths from whooping-cough in the Scotch towns showed an increase of one upon the number in the previous week, and included four in Glasgow, three in Edinburgh, and two in Dundee. The 12 deaths attributed to diarrhœa showed a decline from recent weekly numbers; six were returned in Glasgow, three in Dundee, and two in Aberdeen. The fatal cases of measles, which had been 27 and 20 in the two previous weeks, declined to nine last week, of which seven occurred in Glasgow. Of the eight deaths referred to "fever," six were certified as cerebro-spinal meningitis and two as enteric fever; seven were returned in Glasgow and one in Dundee. The six fatal cases of scarlet fever exceeded those in the previous week by four, and included three in Glasgow and two in Edinburgh. The deaths referred to diseases of the respiratory organs in the eight towns, which had been 119 and 79 in the two preceding weeks, further declined to 77 in the week under notice, and were six below the number returned in the corresponding week of last year. The causes of 13, or 2·4 per cent., of the deaths in these eight towns during the week were not certified or not stated; in the 76 English towns the proportion of uncertified causes of death in the same week did not exceed 0·6 per cent.

HEALTH OF DUBLIN.

The annual rate of mortality in Dublin, which had been equal to 25·0 and 19·0 per 1000 in the two preceding weeks, rose again to 22·2 in the week ending May 23rd. During the first eight weeks of the current quarter the death-rate in Dublin averaged 22·6 per 1000; the mean rate during the same period did not exceed 14·6 in London and 15·7 in Edinburgh. The 168 deaths of Dublin residents registered in the week under notice showed an increase of 24 upon the number returned in the previous week and included four which were referred to the principal epidemic diseases, against ten, eight, and six in the three preceding weeks. These four deaths were equal to an annual rate of 0·5 per 1000, the rate during the week from the same diseases being 0·9 in London and in Edinburgh. Of the four deaths from these epidemic diseases in Dublin, one each resulted from measles, scarlet fever, whooping-cough, and diarrhœa, but not one from diphtheria, "fever," or small-pox. The 168 deaths from all causes in the city during the week under notice included 21 of infants under one year of age and 48 of persons aged upwards of 60 years. Three inquest cases and five deaths from violence were registered, and 83, or 49·4 per cent., of the deaths occurred in public institutions. The causes of four, or 2·4 per cent., of the deaths registered in the city during the week under notice were not certified; the causes of all the 1153 deaths in London last week were duly certified, while in Edinburgh 3·0 per cent. of the causes of death were uncertified.

VITAL STATISTICS OF LONDON DURING APRIL, 1908.

IN the accompanying table will be found complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious disease it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 6·1 per 1000 of the population, estimated at 4,795,757 persons in the middle of the year; in the three preceding months the rates were 8·4, 7·8, and 6·8 per 1000 respectively. The lowest rates last month were recorded in Hammersmith, the City of Westminster, Hampstead, St. Pancras, and Southwark; and the highest rates in Shoreditch, Bethnal Green, Stepney, Poplar, Battersea, and Woolwich. A further decline in the prevalence of scarlet fever was recorded last month; among the various metropolitan boroughs this disease was proportionally most prevalent in St. Marylebone, Stoke Newington, Bethnal Green, Stepney, Poplar, Battersea, Deptford, Greenwich, and Lewisham. The Metropolitan Asylums hospitals contained 2868 scarlet fever patients at the end of April, against 3866, 3591, and 3150 at the end of the three preceding months; the weekly admissions averaged 319, against 423, 410, and 336 in the three preceding months. Diphtheria was also less prevalent in April than in other recent months; the greatest proportional prevalence of this disease was recorded last month in the City of London, Shoreditch, Stepney, Poplar, Wandsworth, Lewisham, and Woolwich. The number of diphtheria patients remaining under treatment in the Metropolitan Asylums hospitals, which had been 1135, 1184, and 1081 at the end of the three preceding months, had further declined to 872 at the end of last month; the weekly admissions during April averaged 107, against 150, 149, and 131 in the three preceding months. The prevalence of enteric fever continues to show a slight diminution; among the several boroughs the greatest proportional prevalence of this disease last month was recorded in Hammersmith, St. Marylebone, St. Pancras, Shoreditch, Southwark, Bermondsey, and Battersea. There were 45 enteric fever patients under treatment in the Metropolitan Asylums hospitals at the end of last month, against 96, 79, and 73 at the end of the three preceding months; the

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING APRIL, 1908.

(Specially compiled for THE LANCET.)

Cities and Boroughs.	Estimated population in the middle of 1908.	Notified Cases of Infectious Diseases.									Deaths from Principal Infectious Diseases.									Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cerebro-spinal meningitis.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.		
LONDON	4,795,757	—	1736	646	—	81	3	18	220	7	2611	6·1	—	232	53	70	175	—	13	—	63	606	1·3	6664	14·9	164
West Districts.																										
Paddington	150,923	58	7	7	—	1	—	—	7	—	73	5·0	—	6	1	1	1	—	—	—	—	9	0·6	164	11·3	91
Kensington	182,752	49	20	20	—	1	—	1	14	—	85	4·9	—	2	1	3	—	—	—	—	2	8	0·5	269	16·4	123
Hammersmith	124,012	—	31	9	—	3	—	2	4	1	50	4·2	—	1	3	1	2	—	—	—	1	8	0·7	179	16·1	103
Fulham	171,562	48	25	9	—	4	—	1	11	1	90	5·5	—	18	2	—	6	—	3	—	1	30	1·8	250	16·2	100
Chelsea	75,049	—	19	9	—	1	—	—	9	—	28	5·3	—	3	1	—	1	—	1	—	—	6	0·8	133	18·5	136
City of Westminster	170,545	—	41	14	—	2	—	—	7	—	64	3·9	—	1	—	2	—	—	—	—	4	7	0·4	197	12·0	119
North Districts.																										
St. Marylebone	126,867	—	51	10	—	3	1	1	9	—	75	6·2	—	1	2	3	4	—	—	—	—	10	0·8	219	18·0	65
Hampstead	92,654	—	22	7	—	2	—	1	3	—	35	3·9	—	1	1	1	1	—	—	—	1	5	0·6	75	8·4	63
St. Pancras	237,075	—	64	25	—	6	—	—	10	—	105	4·6	—	6	—	2	13	—	1	—	3	25	1·1	390	17·2	118
Islington	349,091	—	106	37	—	7	—	1	21	1	173	5·2	—	8	4	5	7	—	1	—	2	27	0·8	482	14·4	92
Stoke Newington	54,015	—	22	4	—	1	—	—	2	—	29	5·6	—	3	—	1	1	—	—	—	3	8	1·5	71	13·7	112
Hackney	235,253	—	59	33	—	3	—	1	16	1	143	6·3	—	27	2	3	7	—	—	—	3	42	1·9	316	14·0	114
Central Districts.																										
Holborn	54,466	—	21	3	—	1	—	—	3	—	28	5·4	—	3	—	—	1	—	—	—	1	5	1·0	103	19·7	109
Finsbury	96,007	—	26	15	—	1	—	—	4	—	46	5·0	—	7	1	2	3	—	—	—	3	16	1·7	183	19·9	93
City of London	19,262	—	4	4	—	1	—	—	—	—	9	4·9	—	—	—	—	—	—	—	—	—	—	—	29	21·1	—
East Districts.																										
Shoreditch	115,227	—	45	22	—	5	—	1	15	1	89	8·1	—	17	2	1	6	—	—	—	3	29	2·6	269	18·9	150
Bethnal Green	131,066	—	96	21	—	—	—	—	19	—	136	10·8	—	9	5	4	13	—	—	—	5	26	2·9	226	18·0	108
Stepney	310,706	—	166	56	—	7	—	1	35	—	265	8·9	—	39	8	11	19	—	—	—	12	99	3·3	520	17·5	114
Poplar	171,516	—	91	33	—	1	—	2	12	—	139	8·5	—	10	4	4	9	—	1	—	4	32	1·9	274	16·7	120
South Districts.																										
Southwark	210,442	—	43	19	—	7	—	1	13	—	83	4·1	—	4	1	1	3	—	2	—	4	15	0·7	288	14·8	117
Bermondsey	127,910	—	48	20	—	3	—	—	13	—	84	6·8	—	—	1	5	4	—	—	—	—	10	0·8	211	17·2	107
Lambeth	321,344	—	123	26	—	4	2	—	13	2	170	5·5	—	18	3	2	11	—	1	—	2	37	1·2	467	16·2	88
Battersea	183,873	—	84	24	—	9	—	1	11	—	129	7·3	—	13	3	3	10	—	1	—	—	30	1·7	246	14·0	131
Wandsworth	289,506	—	81	81	—	2	—	1	22	—	167	6·7	—	13	2	5	9	—	1	—	1	31	1·1	362	12·7	86
Camberwell	250,022	—	85	29	—	3	—	2	25	—	144	5·4	—	10	3	—	12	—	1	—	3	29	1·1	359	13·4	104
Deptford	117,539	—	50	14	—	1	—	—	10	—	75	6·7	—	8	—	—	4	—	—	—	—	13	1·2	164	13·7	116
Greenwich	109,110	—	52	17	—	—	—	—	3	—	72	6·9	—	1	1	3	3	—	—	—	2	10	1·0	143	13·7	125
Lewisham	156,627	—	69	28	—	1	—	1	4	—	103	6·9	—	3	1	3	11	—	—	—	1	19	1·3	183	12·2	69
Woolwich	131,346	—	52	34	—	1	—	—	5	—	92	7·3	—	—	1	4	4	—	—	—	1	10	0·8	162	12·1	83
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

weekly admissions averaged seven, against ten in each of the two preceding months. Erysipelas was proportionally most prevalent in Chelsea, Shoreditch, Bethnal Green, Stepney, Bermondsey, and Deptford. The 18 cases of puerperal fever notified during the month included two which belonged to Hammersmith, two to Poplar, and two to Camberwell. Of the seven cases notified as cerebro-spinal meningitis two belonged to Lambeth, and one each to Hammersmith, Fulham, Islington, Hackney, and Shoreditch.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the five weeks ending May 2nd the deaths of 6864 persons belonging to London were registered, equal to an annual rate of 14·9 per 1000; in the three preceding months the rates were 17·5, 17·4, and 16·1 per 1000. The death-rates last month in the several boroughs ranged from 8·4 in Hampstead, 11·3 in Paddington, 12·0 in the City of Westminster, 12·1 in Woolwich, and 12·2 in Lewisham, to 18·0 in St. Marylebone and in Bethnal Green, 18·5 in Chelsea, 18·9 in Shoreditch, 19·7 in Holborn, 19·9 in Finsbury, and 21·1 in the City of London. The 6864 deaths from all causes included 606 which were referred to the principal infectious diseases; of these, 232 resulted from measles, 53 from scarlet fever, 70 from diphtheria, 175 from whooping-cough, 13 from enteric fever, and 63 from diarrhœa, but not any from small-pox, from typhus fever, or from ill-defined pyrexia. No death from any of these diseases was recorded last month in the City of London; they caused the lowest death-rates in Paddington, Kensington, the City of Westminster, and Hampstead; and the highest rates in Fulham, Hackney, Shoreditch, Bethnal Green, Stepney, and Poplar. The 232 deaths from measles were 76 fewer than the corrected average number in the corresponding periods of the five preceding years; this disease was proportionally most fatal last month in Fulham, Hackney, Finsbury, Shoreditch, Stepney, and Battersea. The 53 fatal cases of scarlet fever were eight in excess of the corrected average number; the highest death-rates from this disease were recorded in Hammersmith, Bethnal Green, Stepney, Poplar, Shoreditch, and Battersea. The 70 deaths from diphtheria exceeded by ten the average number in the corresponding periods of the five preceding years; among the various metropolitan boroughs the greatest proportional mortality from this disease was recorded in St. Marylebone, Bethnal Green, Stepney, Poplar, Bermondsey, Greenwich, and Woolwich. The 175 fatal cases of whooping-cough were 75 fewer than the corrected average; this disease was proportionately most fatal in St. Pancras, Shoreditch, Bethnal Green, Stepney, Poplar, Battersea, and Lewisham. The 13 deaths referred to "fever" showed a decline of seven from the corrected average in the corresponding periods of the five preceding years; of these 13 deaths, three belonged to Fulham, two to Southwark, and one to each of the eight other boroughs. The 63 fatal cases of diarrhœa were 16 below the corrected average number; this disease was proportionately most fatal in the City of Westminster, Stoke Newington, Finsbury, Shoreditch, Bethnal Green, Stepney, and Poplar. In conclusion, it may be stated that the aggregate mortality in London last month from these principal infectious diseases was 21·7 per cent. below the average.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 104 per 1000. No death at this age was registered in the City of London; among the metropolitan boroughs the lowest rates of infant mortality were recorded in St. Marylebone, Hampstead, Lambeth, Wandsworth, Lewisham, and Woolwich; and the highest rates in Kensington, Chelsea, Stoke Newington, Shoreditch, Battersea, and Greenwich.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet-Surgeon: E. J. Finch to the *Dominion*, on recommissioning. Staff-Surgeon: J. K. Raymond to the *Latona*, on recommissioning. Surgeons: G. E. Hamilton to the *Dominion*, on recommissioning; E. M. W. Hearn to the *Ocean*, on recommissioning; T. Creaser to the *Canopus*; G. B. Scott to the *Warrior*; G. Carlisle to the *Barfleur*; J. McCutcheon to the *Hecla*; H. Hunt to the *President*, additional, for three months' course at West London Hospital; and H. H. Babington to the *Blake*.

The following qualified candidates for the Naval Medical Service have been appointed Surgeons in His Majesty's Fleet:—Arthur Tunna Rivers, Gustavus William Musgrave Custance, John Stains Austin, Archibald Louis Robinson, William Harold Edgar, Arthur Rowland Fisher, David Hughes Charles Given, Charles James Aveling, John Marcus Hayes, Edward Leicester Atkinson, Frank Harold Stephens, Gerald Arthur Bradshaw, Samuel Bradbury, Percy Blackwood Egan, Robert Marmaduke Riggall (dated May 12th, 1908).

ARMY MEDICAL SERVICE.

Colonel William Babtie, V.C., C.M.G., from supernumerary to establishment, to be Colonel, vice A. T. Sloggett, C.M.G., promoted (dated April 13th, 1908).

INDIAN MEDICAL SERVICE.

The King has approved of the following promotions among officers of the Indian Medical Service:—Majors to be Lieutenant-Colonels: James Reid Roberts, James Graham Hojel, Frederick William Gee, Kanta Prasad, Patrick Wilkins O'Gorman, William Henry Gray, Henry Charles Leffler Arnim, George Sloane Thomson, Frank Charles Pereira (dated March 31st, 1908).

The retirement of Lieutenant-Colonel George Augustus Emerson has also been approved (dated April 2nd, 1908).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain James Cameron to be Surgeon-Major (dated May 13th, 1908).

THE EXAMINATIONS FOR SURGEONS IN THE ROYAL NAVY.

The following is a list of the successful candidates with their total marks, six of whom had University degrees:—

	Marks.		Marks.
A. T. Rivers	1836	J. M. Hayes	1286
G. W. M. Custance ...	1729	E. L. Atkinson	1225
J. S. Austin	1660	F. H. Stephens...	1193
A. L. Robinson	1470	G. W. Bradshaw	1188
W. H. Edgar	1465	S. Bradbury	1155
A. R. Fisher	1380	P. B. Egan...	1137
D. H. C. Given	1330	R. M. Riggall	1128
C. J. Aveling	1325		

THE IMPERIAL YEOMANRY HOSPITALS AND THE HALL-EDWARDS FUND.

We announced last week that the members of the Imperial Yeomanry Hospitals committee, staff, and some of its principal subscribers had sent to Mr. Oliver Williams, the secretary to the honorary treasurer, £221 11*s.* towards the Hall-Edwards Fund as a mark of appreciation of the services rendered during the African war by Mr. J. Hall-Edwards. The following is a list of the contributors, many of whom have written letters expressing their sympathy with Mr. Hall-Edwards and their appreciation of the invaluable x ray work which he has done for the alleviation of suffering humanity:—

	£	*s.*	*d.*
Mrs. Willock	50	0	0
Messrs. J. and J. Colman, Limited	10	10	0
Messrs. Mosenthal, Son, and Co.	10	10	0
Mr. J. D. Charrington ...	10	0	0
Mrs. Antony Gibbs ...	10	0	0
Mr. I. A. Mullens	10	0	0
Mr. Ludwig Neumann	10	0	0
The Lady Rothschild ...	10	0	0
The Lady Royds	10	0	0
Sir Alfred D. Fripp, K.C.V.O., C.B.	5	5	0
Adeline Duchess of Bedford	5	0	0
The Lord Fitzhardinge	5	0	0
The Lady Gilmour ...	5	0	0
Mrs. Grace	5	0	0
The Earl Howe, G.C.V.O.	5	0	0
Mrs. Hornby Lewis ...	5	0	0
Miss Edith Somers ...	5	0	0
Mrs. Harry Sargent ...	5	0	0
Mr. L. Vernon Cargill ...	3	3	0
Miss Rachel Humphreys	3	3	0
Mr. Henry J. Roby ...	3	3	0
Sir William and Lady Baillie-Hamilton ...	3	0	0
Mr. Charles Davis	2	2	0
Messrs. W. and A. Gilbey, Limited	2	2	0
Captain Gilliat	2	2	0
Lady Algernon-Gordon-Lennox	2	2	0
Mr. Raymond John ...	2	2	0
Mrs. Northcote	2	2	0
The Lady Gwendolin Cecil	2	0	0
The Countess of Essex	2	0	0
The Lady Garvagh ...	2	0	0
Mary, Lady Gerard ...	2	0	0
Mrs. J. Muller	2	0	0
Miss Alice M. Laird ...	1	1	0
Miss Ellen Laird	1	1	0
The Countess of Scarborough	1	1	0
Mrs. Warde	1	1	0
Colonel A. T. Sloggett, C.M.G., R.A.M.C. ...	1	1	0
The Lady Eva Dugdale	1	0	0
Mrs. Carr Glyn	1	0	0
Colonel and Mrs. Baldock	1	0	0
Mrs. McCreagh Thornhill	1	0	0
The Marchioness of Zetland	1	0	0

The Imperial Yeomanry School committee has forwarded to Mr. Oliver Williams a cheque for £100.

THE ARMY AND NAVY MALE NURSES' COÖPERATION.

H.R.H. Princess Henry of Battenberg opened a novel sale at the Caxton Hall, Westminster, on May 22nd, which was organised to raise funds for the Army and Navy Male Nurses' Coöperation. The sale was unique of its kind, being the first large jumble sale attempted in London. It lasted two days and the poor flocked from all quarters. There was a large queue assembled outside the doors long before the hours of admission. The keenness of the buyers was so great that by 8 o'clock on the second day every stall was entirely cleared, with the result that a very substantial sum was realised. The Coöperation is in full working order and every month the demand for nurses is becoming greater and the only drawback to the scheme is the want of funds to equip a residential home where the men can lodge in the intervals between their cases. It is for this reason that the committee is earnestly appealing for support. It is hoped that in a short time the Coöperation will be self-supporting, as the men pay a percentage on their earnings, and when the home is started they will pay for their residence there.

THE TERRITORIAL FORCES.

The Earl of Albemarle, in the House of Lords on May 26th, called the attention of the Under Secretary for War to, among other things, the inadequacy of the provision for travelling allowance in respect of officers of the Territorial Forces and of the remuneration of medical officers for examining soldiers for physical fitness. Medical officers were allowed only 1*s.* a head for examining recruits. Lord Lucas, in reply, said that officers would be entitled to travel first class. With regard to the payment of medical men for examining recruits, in the past many medical officers had examined recruits free. The country was much indebted to them for it and it was hoped that many of them would continue to do so. Where a recruit had to go to a medical man who did not belong to the Territorial Force the charge would probably be more than 1*s.* The Earl of Albemarle pointed out that to examine a recruit properly took at least a quarter of an hour. As many as 150 recruits might have to be examined and the medical man could not be expected to give so much time for nothing.

INDIAN MEDICAL SERVICE EXAMINATIONS.

Dr. V. H. Rutherford, in the House of Commons on May 26th, asked the Under Secretary for India whether His Majesty's Government would advise the Government of India to hold examinations for the Indian Medical Service in India as well as in England. Mr. Buchanan replied in the negative.

CHOLERA IN INDIA.

The India Office reports six more deaths from cholera in the 1st Battalion Munster Fusiliers.

Correspondence.

"Audi alteram partem."

DEATHS DURING ANÆSTHESIA.

To the Editor of THE LANCET.

SIR,—The correspondence which has been going on since February has given opportunity for the expression of various views more or less directly related with the question of fatalities during anæsthesia. With regard to some of the questions raised, such as the desirability or the opposite of coroners' inquests in these cases of death, no definite result seems possible of attainment as the outcome of correspondence, however valuable and interesting may be the opinions of gentlemen taking part in it. With regard to others, such as what is and what is not the proper method of administering chloroform, it seems to me a pity that your columns should be given over to a question of this kind which is thrashed out in text-books even if your correspondents appear to be oblivious of the fact. Even the happy condition of Scotland, in which country there are apparently not only no inquests but also no deaths in connexion with the administration of anæsthetics, seems to me beside the mark in this discussion, particularly as the methods now recommended by Edinburgh teachers bear a strong resemblance to those which have been taught in London for many years. What does, however, seem to be worthy of attention and to demand some sort of united action is this fact, that your correspondents, in whatever other ways they disagree, all seem to concur in the opinion that formal recognition of the study of anæsthetics by all examining bodies is highly desirable. It appears, in fact, to be the opinion that for a man to be able to take a good medical degree and never have given an anæsthetic or been instructed how to give one is at the present day an anomalous and highly regrettable state of things. Yet such is the present condition as regards several of the most important examining bodies that are able to grant a qualifying diploma. Well, Sir, the General Medical Council can rectify this defective state of affairs, as has been already pointed out, and I would urge your readers to bring what pressure they individually can upon members of the General Medical Council to take a step which is, I believe, desired without exception by all who take an interest in the teaching or the practical administration of anæsthetics.

I am, Sir, yours faithfully,

Cavendish-place, W., May 23rd, 1908. J. BLUMFELD.

THE TREATMENT OF SYPHILIS BY MEANS OF ARSENICAL MEDICATION.

To the Editor of THE LANCET.

SIR,—As syphilis is one of those diseases which affect everything in a man's life all means of cure deserve our careful thought and are of great practical interest. We have powerful weapons against this malady and you may ask me, Why should we endeavour to add to therapeutics and introduce new drugs when we already possess the classical treatment of mercury and iodide of potassium which yields the best results? Mercury and iodine often, but not always, cure the disease. All syphilis specialists have seen cases where syphilitic ulcers resist mercurial medication, whatever form it may be, and they have thus often found that by an intensive treatment they subject their patient to accidents without any improvement as to the disease itself. Even strong people are not always unaffected by the mercurial treatment, and how many are there who do not care to stand the least dose of mercury, either internally or in the form of friction? Thus has arisen, then, the idea of dragging out of oblivion a remedy unjustly forsaken—viz., arsenic, which can show to its credit numerous cures of the syphilitic virus.

Biett had used arsenic against old and degenerated venereal diseases, especially when grave complications and other circumstances had rendered the mercurial treatment useless, and he did so in conjunction with Hoffmann, Horn, Buchner, Girdlestone, and others. Furthermore, it was he who introduced the administration of arsenate of ammonia for cases of syphilis of a dermoid, tuberculous, or squamous character. Donovan, professor of chemistry and pharmaceutics at Apothecaries' Hall, Dublin, proposed in 1839 against obstinate forms of syphilis the use of iodine and arsenic combined and of iodide of mercury. After having unjustly and almost generally fallen into oblivion this preparation continued to be of service to many practitioners, who used the formula modified by Mr. Astruc and composed as follows: arsenious anhydride, 0·05 gramme; bromide of mercury, 0·40 gramme; iodide of potassium, 4·00 grammes; and water, 120·00 grammes.

At the congress of Bonn Mr. Darvosky read a very interesting communication on the "Liquor Arsenici et Hydrargyri against ..... Syphilis." In 1852 Hunt wrote a highly interesting article "The Comparative Value of Mercurial and Arsenical Preparations and the Treatment of the Secondary Accidents in Syphilis." Three years later Gaskvin reported in the *Medical Times and Gazette* (Vol. VI., p. 211) on two cases of pustular syphilis refractory to mercury and iodine which were cured by the internal use of arsenic. Then an experiment by Nicolas[1] with the use of arsenic in a case of visceral syphilis had given excellent results. In 1891[2] Henry Smith showed very clearly the effect of arsenic on syphilis. After that, in 1900, under Brocq's influence, the use of arsenic was again resorted to, cacodylate of mercury and salicylarsenate of mercury being tried, and now it is proved that arsenic alone is an agent which, if not superior to iodide of mercury or to mercury, is at least equal to its predecessors,

[1] Journal de Thérapeutique, 1883, Nos. 1 and 2.
[2] Brit. Med. Jour., vol. ii., p. 1203.

and that in a number of cases it may replace, or be a valuable adjunct to, them. Of all the arsenical preparations the most notable is certainly anhydrous atoxyl, anilide of meta-arsenic acid ($C_6H_7N-HAsO_2$ according to the German chemists), which contains therefore 37·69 per cent. of arsenic; but Mr. Fourneau, the inventor of stovaine, has shown us that its true formula is $C_6H_5NH-AsO\begin{cases}ONa\\OH\end{cases}+2H_2O$ and that it contains 29 per cent. of arsenic only. After having consecutively studied it in different affections, Paul Salmon has just introduced it with complete success in the treatment of syphilis. It may be administered by the mouth, as in the case of other arsenic preparations, in doses of 0·10 centigramme three times daily in powders, or three doses a day employed hypodermically.

Atoxyl	...	...	5 centigrammes.
Water	...	...	1 cubic centimetre.

in 1 ampoule;

or else the most concentrated solution possible

Atoxyl	...	...	1·50 grammes.
Water	...	...	10·00 cubic centimetres.

A cubic centimetre contains 15 centigrammes; 2 cubic centimetres for each injection every two, three, or four days. Paul Salmon proceeds in different ways, according to the cases. Three applications of 0·50 gramme in six days and one of 1 gramme on the tenth day. He injects 0·50 gramme in nine days, 3·30 grammes of atoxyl in nine days, or 2·90 grammes in seven days.

Mr. Mendel makes intravenous injections of 20 cubic centimetres every other day for three weeks. Mr. Salmon, in a note, as lucid as it is precise, clearly puts before us the action of arsenic by the constancy of good results at all periods of syphilis, by the rapidity of action of the remedy and by the rapid modification of the lesions. The series of observations made by Mr. Salmon leaves no doubt on the subject, and he has been able to use over 100 doses exceeding 0·50 gramme without the least inconvenience. To these observations have been added those of Messrs. Hallopeau, Lassar, Balzer, and Portier. And it would be possible to succeed in curing syphilis by such medication if we could continue the treatment long enough. And it is unfortunate we cannot, and medication by atoxyl is attended with objections and even dangers which it is necessary to avoid. Nausea, vomiting, diarrhœa, and cold in the extremities have been observed after the treatment. Lassar noticed temporary albuminuria or cystitis; nevertheless, he has arrived at the following conclusions. "The treatment of syphilis by means of atoxyl causes the external manifestations of syphilis, and particularly of malignant syphilis, to disappear. It proves to be of equal efficiency with the treatment by means of calomel injections. It constitutes a new weapon against syphilis,—a weapon which it is advisable to manipulate with prudence, owing to the noxious secondary effects which its use may involve."

An attempt has been made to put down to anilide the noxious and curative effects of atoxyl. The controversy is now closed, and the works of Grey, of Blumenthal, of Rosenthal[2] show that arsenic is the active principle, both curative and noxious, of atoxyl. Therefore, why not use an arsenic medication which is simple and less dangerous? This is what different authorities have done. Mr. Rosenthal subjected his patients to injections of 2 milligrammes of arsenic a day by injections of 1/10 of a Pravas syringe of a 2 per cent. solution of arsenious acid, increasing by 1/10 of a syringe every other day, and his patients are nearly cured without ever having undergone the least arsenical intoxication; and Mr. Merchiewski of St. Petersburg told me during my recent visit to Russia how well satisfied he was with injections of arsenate of soda in malignant cases of syphilis. It is true that he especially ascribes to them a general action which renders the patients better able to bear the mercurial treatment, and Mr. Milian, acting for Mr. Balzer, effected the cure of syphilis as rapidly by arsenate of soda alone as by means of pills of Dupuytren or of proto-iodide. Mr. Milian had treated 11 cases with doses of 0·005 milligramme to 1·5 centigrammes of arsenate of soda a day, and since he wrote his article the cures have been maintained. Dr. Plateau's observations read at the Société Médicale de l'Elyse on May 6th, 1907, are very striking. He obtained very rapidly by a series of injections of cacodylate of soda, simply prescribed to improve the general state, the cure of syphilis which could not be obtained by the treatment with grey oil, and upon a second application the cacodylate of soda gave him complete results. With a third series, however, Dr. Secherer of Heilbronn reports good effects with Fowler's solution. To which arsenical salts are we to give the preference? What is the comparative value of the effects of arsenical salts? At the present moment atoxyl appears to be in favour and I myself, in accordance with Mr. Salmon's method, make an injection of 0·50 centigramme every other day, whilst limiting to six the number of injections. Mr. Hallopeau advises two injections of 0·75 centigramme at two days' interval, and repeated four times at intervals of three days injections of 0·50 centigramme. How long should this be continued? Now the problem of the cure of syphilis has again been propounded let us wait before expressing a final opinion, but in any case the number of observations published hitherto shows that the cures are really due to the antisyphilitic properties of the product and not to the natural evolution of the disease. I shall conclude by saying that the arsenical medication is not better than the mercurial cure of syphilis, other things being equal. It is even less efficient, but the arsenical salts without the counter-symptoms of mercury which would constitute a limited use of it might often and with great advantage be substituted for it, and the undesirable symptoms arising from the frequent necessity of varying the specific treatment, when the infection which has resisted any particular variety of mercurial treatment, may be successfully attacked by arsenical preparations. The most active of these arsenical preparations, according to the view of Dr. Pouchet, who is an authority, will be those in which the setting free of its elementary components in the system will be the more easy.

So we must reserve a special place for thermo-arsenical medication. All doctors for syphilis have always sent their patients to watering-places such as La Bourboule, Wiesbaden, Carlsbad, and Uriage in particular, and in La Bourboule we have observed that the internal action of arsenical waters and baths have done wonders in old cases of dry, squamous, papulous, or papulo-tuberculous syphilis which become chronic notwithstanding the mercury. La Bourboule combines, in the highest degree, all the therapeutic properties which arsenical medication possesses. The waters contain in addition to chloride of sodium and bicarbonate of soda, 0·028 gramme of arsenate of soda, 7 milligramme of metallic arsenic per litre. The waters are dispensed in doses of from 200 to 800 grammes a day, according to the enduring power and capabilities of each patient. I obtained excellent and more rapid results by subcutaneous injections of La Bourboule waters at the rate of 50 to 100 grammes every other day, and I think this therapeutic method should be applied whenever nutrition has become altogether defective. By the internal use of waters and all the external medicatory uses of these baths, douches, &c., we shall see, under the influence of this syphilitic treatment, the patients regain their strength, and the disappearance of specific complications coincides with the recovery of their health.

I am, Sir, yours faithfully,

La Bourboule Spa, April 23rd, 1908. P. FERREYROLLES.

[2] The Medical Society of Berlin, July 1st, 1907.

ESTIMATION OF URIC ACID IN THE BLOOD.

To the Editor of THE LANCET.

SIR,—I trust that the maxim, *Audi alteram partem*, applies to mention in a review as well as elsewhere in your valuable pages, as I note that in the issue of May 23rd, p. 1490, a reviewer quotes: "His method—i.e., the one used by Haig—of determining the uric acid in the blood is ..... absolutely useless." This method suggested by Mr. J. Barker Smith[1] consists simply of the addition to a small drop of blood freshly drawn on a microscope slide of a minute quantity first of a 10 per cent. solution of sodii carb. and then of a 20 per cent. solution of ammonii chlor. (a well-known precipitant of uric acid). The mixture of blood and solutions is examined under the microscope after a definite and constant interval (say, 40 minutes) to allow of precipitation, and the ratio of granules to red cells, which is quickly observed, gives the approximate quantity of uric acid in the blood at the time it was drawn.

[1] Medical Times and Hospital Gazette, September, 1896.

I would merely ask your readers before indorsing the opinion above quoted to try the method on a patient taking a salicylate. In normal blood the granules bear a relation to red cells of 1 to 10 in the morning to 1 to 25 in the evening; but on the first or second day on salicylate they will be found in the relation of say one granule to every one or two red cells, and on the day after the salicylate has been left off they will be, say, 1 to 40 to 1 to 70 red cells. If the uric acid in the urine is estimated concurrently it will be abnormally high on the first and second days on salicylate and abnormally low on the first day after it is left off. Apart from drugs similarly large numbers of granules will be found in the blood of diabetes or Bright's disease, or similarly small numbers with the rising temperature of any fever, and the results are constant and correspond with the quantity of uric acid in the urine.

However, I now use this method but rarely, as I soon found out that the number of granules in the blood and the quantity of uric acid in the blood and urine correspond, other things equal, with the rate of the capillary circulation. And as it takes some 10 to 15 minutes' work to count the red cells and granules with sufficient accuracy, while the rate of the capillary circulation can be measured in half a minute, the short process naturally replaces the long for ordinary clinical work, and I now use the granules chiefly for purposes of demonstration. Let us say that normally a white spot made on the skin with the point of the finger will regain its colour in six half seconds in the morning and in five in the evening. On the first day or two on salicylate this will have slowed to eight, nine, or ten half seconds, and on the day after it has been left off it will have quickened to three or four half seconds. Similarly, in Bright's disease or diabetes it will be about the same rate as under salicylate and about the same number of granules will be found in the blood.

I maintain, Sir, that a method which gives such constant results cannot rightly be characterised as "absolutely useless," and apart from absolute accuracy, which no one has claimed for it, the method of Mr. Barker Smith will tell us the approximate quantity of uric acid in the blood in 15 minutes' work. As I have elsewhere pointed out [2] it is often possible taking the blood at one hour in the morning to tell correctly from the number of granules whether the excretion of uric acid in the urine of the corresponding 24 hours will be greater or less than in that of the previous day. Then the fact above mentioned that the number of granules in the blood can be controlled by drugs places the results above all possibility of accidental error. Naturally, as I have used the method of Mr. Barker Smith for many years I can now work it more easily and accurately than those who have never tried it; but anyone can see the great changes in the number of granules produced by giving salicylates and if your readers will try it in that way I shall be quite ready to abide by their verdict. It is right to add that I previously used other methods for the estimation of uric acid in the blood of man and animals and that the results with those also were in accord with the above statements.[3]

I am, Sir, yours faithfully,

Brook-street, W., May 23rd, 1908. A. HAIG.

A NEW METHOD OF RESTORING THE CONTINUITY OF THE BOWEL IN CASES OF EXCISION OF A GROWTH LOW DOWN IN THE SIGMOID FLEXURE.

To the Editor of THE LANCET.

SIR,—In your issue of May 23rd Mr. G. Grey Turner refers to an article in the *British Gynæcological Journal* for 1901, in which Mr. J. Rutherford Morison describes an operation similar to that described by me recently under the above heading. I have since read Mr. Morison's article and there is no doubt that he has anticipated my idea. I was unaware, until I read Mr. Turner's letter, of Mr. Morison's paper, but I think I may be excused for having overlooked it, as it is buried in the middle of an article apparently upon another subject in a special journal.

In one, I think, important particular my operation differs from that described by Mr. Morison. After tying the tube into the sigmoid and passing it down the rectum, he says "a ligature is then passed round, immediately below the lower cut end, and tightly tied." Now the slough of bowel caused by this second ligature will be on the peritoneal aspect of the junction and must either be absorbed or must drain into the peritoneal cavity, and unless the invagination of the upper end into the lower is much greater than is usually possible, this slough will be very liable to cause peritonitis. In my method the only slough which has to separate is in the cavity of the rectum. In Mr. Morison's paper he attributes his fatal cases to the bowel being loaded at the time of operation and states that a preliminary colotomy ought to have been done. From this it would appear that he used a much narrower tube than I did, as the tube I used was the same size as that ordinarily employed in performing a preliminary colotomy by Paul's method and therefore as regards the relief of a loaded bowel the conditions after my operation were practically identical with those present if a preliminary colotomy by Paul's tube had been done, with the advantage, however, that an anastomosis was subsequently established and the patient saved the unpleasantness of a colotomy opening. I think the somewhat high mortality which attended the operation in Mr. Morison's hands is to be attributed partly to the above differences in the method employed and partly to the fact that the technique of abdominal operations ten years ago was not quite so perfect as it is now.

Mr. Turner says in his letter that the method described by Mr. Morison "has almost been entirely superseded by other methods." He does not, however, state what methods there are by which a patient is left after excision of part of the sigmoid with a normal bowel opening in place of a colotomy, in cases where anastomosis by the ordinary methods cannot be performed. And it was only in such cases that I advocated this method. End-to-end or lateral anastomosis by stitching is now quite a satisfactory operation in the sigmoid flexure if the ends of the bowel are long enough and it is properly done. But there remain a few cases where it cannot be performed and in such this method of restoring the bowel will save the patient the inconveniences of a colotomy without increasing the risks of the operation.

I am, Sir, yours faithfully,

P. LOCKHART MUMMERY.

Cavendish-place, W., May 25th, 1908.

[2] Uric Acid, seventh edition (Churchill), Chapter iii.
[3] Ibid.

"BRIEF NOTES OF INTERESTING CASES OF CRANIAL SURGERY": A CORRECTION.

To the Editor of THE LANCET.

SIR,—You were good enough in your issue of May 23rd to insert an abstract of my lecture with the above title, and I should be greatly obliged if you will correct a printer's error of some importance therein. On p. 1480 it is stated that the cerebro-spinal fluid in *extra*-dural hæmorrhage is clear, whereas it is blood-stained in *extra*-dural hæmorrhage from cerebral laceration or torn sinus." The second "extra-dural" should read *intra*-dural, the revised version reading: "the cerebro-spinal fluid in *extra*-dural hæmorrhage being clear, whereas it is blood-stained in *intra*-dural hæmorrhage from cerebral laceration, or torn sinus" (Ballance). Thanking you for your courtesy in this matter,

I am, Sir, yours faithfully,

May 25th, 1908. HENRY CURTIS.

THE HALL-EDWARDS FUND.

To the Editor of THE LANCET.

SIR,—Your readers will be glad to learn that the fund which has been raised on behalf of Mr. J. Hall-Edwards has received generous support, the sums contributed amounting to £2001 9*s.* 6*d.* The fund being now closed the committee would like to take this opportunity to thank the many donors for their practical sympathy.

We are, Sir, yours faithfully,

ROBERT M. SIMON, M.D. Cantab. } Hon. Secretaries.
J. C. VAUDREY, M.Inst C.E. }

41, Newhall-street, Birmingham, May 26th, 1908.

INDIAN MEDICAL SERVICE ANNUAL DINNER.—At the annual dinner of the Indian Medical Service which, as we announced last week, will be held at the Gaiety Restaurant, Strand, on Thursday, June 18th, at 7.45 P.M., Surgeon-General A. M. Branfoot, C.I.E., I.M.S., will preside.

NOTES UPON HEALTH RESORTS.

SCANDINAVIAN WINTER HEALTH STATIONS.

(BY A SPECIAL COMMISSIONER.)

IV.[1]

NORWEGIAN PRIVATE SANATORIUMS FOR CONSUMPTIVES.

THE term "sanatorium" is employed in Norway in a much more comprehensive sense than in this country. Here it has almost, if not entirely, become restricted to institutions devoted to the care of consumptive and other tuberculous patients. Throughout Scandinavia the title "sanatorium" is not only applied to establishments for such cases but is also used to designate what in this country would probably be termed hydropathic establishments, country hotels, and the like. Thus the fashionable resorts near Christiania, Holmenkollen and Voxenkollen, are labelled "sanatoriums," and the same name is given to many of the mountain hotels in the Norwegian highlands and elsewhere throughout the country. This is a point which it is well should be made clear, for it must be understood that the manager of an "ordinary" Norwegian sanatorium looks askance at any openly tuberculous case, knowing well that the presence of one consumptive invalid may keep away very many healthy sportsmen or other more remunerative non-tuberculous visitors. This has meant that until recently many Norwegian patients have had to seek treatment abroad, usually in German sanatoriums. During the last few years Norwegians have to some extent realised the folly of this course, and now several excellent institutions specially designed and definitely managed for consumptive patients are available.

NORWAY AS A HEALTH RESORT FOR CONSUMPTIVES.

The inhabitants of almost every land when overtaken by disease are wont to consider other countries more desirable than their own for purposes of restoration and to resort to foreign stations and strange physicians rather than secure rational measures in their own homeland. This until a few years since has been true of the inhabitants both of Norway and England. The former up to recently might well have urged as an excuse lack of facilities. And the latter may still point legitimately to the trying climatic conditions which exist during a long winter and often no less trying spring.

Norway certainly offers many advantages for the treatment of consumptive and other tuberculous cases. The climate of many districts both during summer and winter offers almost ideal conditions for the effective conduct of "open-air" treatment. English patients could hardly be sent to better winter quarters. Experience gained during many years has fully established the value of an Alpine winter climate for many consumptives. In Norway practically all the climatic benefits of Switzerland may be obtained without some of their drawbacks. The moderate altitude of the Norwegian highlands as compared with the high elevation of many Swiss resorts is undoubtedly for many cases a very decided advantage. Norway can offer, perhaps, a greater number of natural elements making for arrest of tuberculous disease than almost any other country. The long winter affords an excellent period for a course of systematic hygienic treatment. Snow lies on the ground from about November to March or April, thus insuring an absence of irritating dust. The continuous keen frost exercises a stimulating effect on all metabolic processes. The clear, rarefied, dry, ozonised air, free from all chemical, microbial, and mechanical impurities, provides the most perfect of remedial applications. The absence of thick and irritating fogs, so trying to many consumptives in the town districts of England, is a loss which must be reckoned as a very conspicuous benefit. The abundance of sunlight usually enjoyed throughout a considerable portion of the day is another count of importance. Winds seem to be far less frequent and trying there than here, and the best sanatoriums being surrounded by, or near to, forests of pine, birch, and fir are afforded protection at practically all times. The opportunities for walking and other forms of suitable exercise and desirable outdoor recreations are unrivalled.

The absence from fashionable resorts with the unavoidable excitement and unsettling which come from the intrusions of gaieties, sports, social functions, and the like, into the regulated life of the consumptive offers advantages the real benefit of which the physician alone can fully estimate.

The dietary and order of meals customary at most Norwegian sanatoriums are certainly in accordance with the best medical principles and should prove quite congenial to English patients. At all meals there is considerable variety and the food is usually excellent. In the preparation of nearly all dishes much cream seems to be used and fat enters into the dietary in many pleasant forms. Hyper-alimentation in the old-fashioned and discredited procedure of "stuffing" is, of course, discarded.

A very practical advantage must be definitely noted. The best type of sanatorium treatment may be enjoyed in Norway at a charge similar to, if not less than, that which a patient has to pay at the least commendable of private institutions in Great Britain.

There is no doubt that the difficulties and the initial expense of access to Norway and the far removal from home and friends are serious drawbacks which for young subjects and old people are perhaps generally to be considered insuperable. But for early disease occurring in fairly vigorous adults, especially those belonging to the professional and educated classes, a winter wisely spent in Norway affords probably the very finest means of securing the maximum of benefit with the minimum of discomfort and expense.

GENERAL CHARACTERISTICS OF NORWEGIAN PRIVATE SANATORIUMS FOR CONSUMPTIVES.

After a careful inspection of nearly all the private Norwegian sanatoriums for tuberculous patients a few general "impressions" may be of service in aiding physicians at home to form an opinion as to their suitability for English cases.

It must be remembered that the population of Norway is comparatively small, being under 2,500,000, and that few of the people can be considered wealthy. While the dire poverty conspicuous in this land is practically unknown, the equally prominent wasteful extravagance and useless luxury prevailing here are never seen. The simplicity and absence of needless redundances which are evidenced in nearly all Norwegian establishments are, as might be expected, manifest in its sanatoriums. The Norseman is far too sensible to expend his main capital in the erection of palatial buildings and to trust to ephemeral and voluntary agencies for their upkeep. In all the establishments which I visited there were abundant evidences that science and common sense had been allowed directing influence rather than sentiment and a self-advertising extravagance. In the equipment and ordering of these sanatoriums the requirements of the Norwegians themselves have been chiefly, if not solely, considered. Until recently the possibility of attracting English patients has hardly been considered. A pleasing simplicity is apparent everywhere. Even the casual visitor is at once struck by the sense of comfort and homely spirit which prevails and there is a lack of officialism and that depressing institutional atmosphere which is only too common in this country.

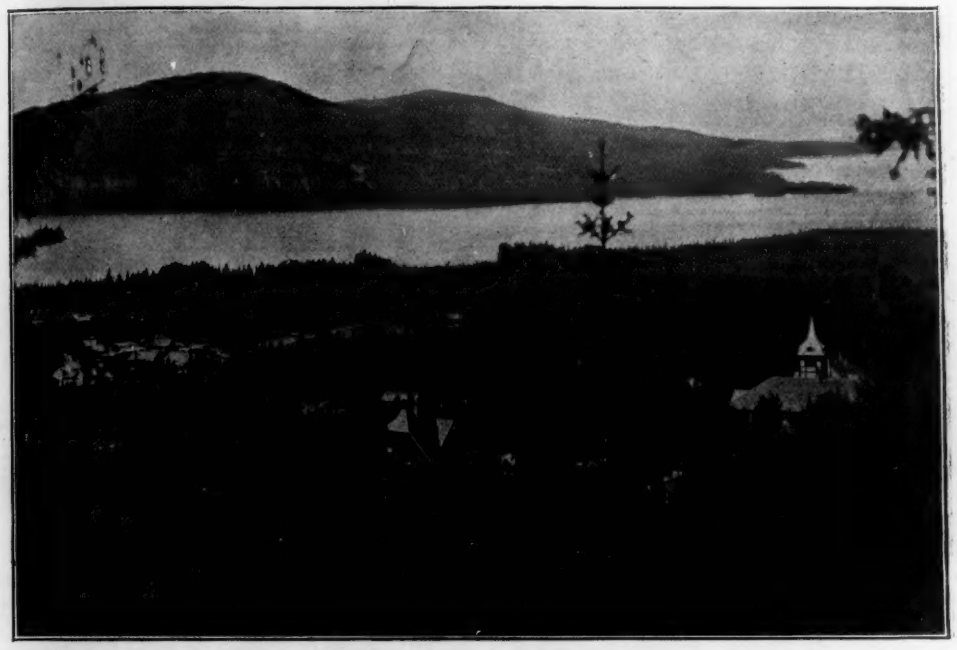
Medical practitioners are particularly well equipped in Norway for the practice of their profession and all those whom I met engaged in sanatorium work struck me as being exceptionally suited for their special duties. While thorough medical supervision is insured, useless and irritating military methods of discipline are avoided. The Norwegian is constitutionally a gentleman, quiet, considerate, courteous, and yet sympathetic. English, and especially Scotch, patients feel quite at home when acting under such direction. In the best sanatoriums the dietary and order of meals should be acceptable to English patients. The food, while fairly plain, is invariably good, well selected, excellently cooked, and varied. Oatmeal porridge is a favourite dish at breakfast. The nurses and attendants, so far as could be judged, take an active interest in their work and manifest a distinct *esprit*.

In most of the sanatoriums there is considerable variety in the size, shape, and position of the patients' rooms, and in several cases each room is differently furnished in most attractive Norwegian style and colouring. The beds appear invariably to be strong and comfortable, and scrupulous

[1] Nos. I., II., and III. were published in THE LANCET of April 25th (p. 1238) and May 2nd (p. 1306) and 16th (p. 1435), 1908.

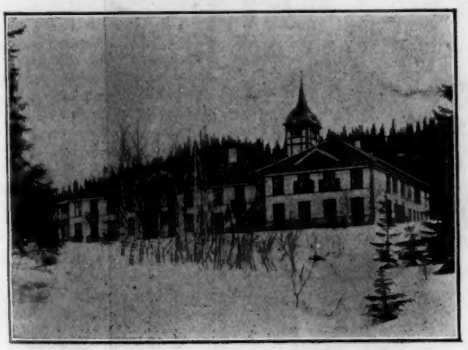
cleanliness is evidenced everywhere. The sanitary conditions are generally good. In some cases earth closets are in use but they appear to be quite satisfactory. In some instances, as is almost invariably the case in hotels and private houses, there appears to be a tendency to overheat the rooms. The natural and other features of Norway, with its unlimited supply of wood, abundance of water, readily tapped sources of power for electrical plant and the

FIG. 1.



Mesnalien Private Sanatorium for Consumptives, near Lillehammer, Norway. The tower of the sanatorium is shown on the right amidst pines and birches, the resident physician's house is in the foreground, the hamlet of Mesnalien towards the left, and in the distance lakes and pine-clad hills.

FIG. 2.



Mesnalien Private Sanatorium for Consumptives, near Lillehammer, Norway.

like, good roads, and excellent railway, postal, and telephone systems, enable these sanatoriums even in remote districts to be conducted with efficiency and comfort at very economical rates.

MESNALIEN SANATORIUM.

This is undoubtedly the premier private sanatorium for consumptives in Norway. It compares very favourably with similar institutions in our own and other lands. Having fully inspected the whole establishment and spent several days in observation of the routine life of the place your Commissioner is strongly of opinion that it is excellently suited to the requirements of many English patients. It was opened in 1900 under the direction of a responsible board of leading physicians and influential laymen, and with the approval of all branches of the profession in Norway. It is conducted by Dr. Jacob Sömme who has had special experience in the management of consumptive cases. The medical director lives with his wife and children in their own house on the estate but spends practically all his time in the sanatorium and presides at all meals. Both Dr. Sömme and his wife speak excellent English and an English-trained nurse is also in residence. At the time of your Commissioner's visit a Cambridge medical graduate was among the patients. English consumptives should speedily feel thoroughly at home here and under the efficient supervision, which is very happily maintained, should do excellently.

The site of this sanatorium, the general characters of which are shown in the accompanying figure (Fig. 1), has been wisely selected. Practically all the requisites of the consumptive patient are here provided for. The place is a first-class all-the-year-round health station. It is placed at an elevation of some 1800 feet above sea level on the south slope of the mountain range lying between Gudbrandsdal and Osterdal. It is surrounded by forests of pine and fir and birch, but lies open on the south with peculiarly attractive views of lakes and forests and undulating hills. The winter climatic conditions seem to be almost ideal for the consumptive: a snow-protected, dustless soil, continuous frost, dry, still, invigorating air, protection from winds, and much sunlight. Fogs are exceptional and are not irritating. The adjacent country is charming and offers endless opportunities for walks, drives, and simple winter exercises.

The construction of the sanatorium has been thoroughly well carried out. The building consists of two storeys. (Fig. 2.) The rooms are large with much window space and have non-absorbent walls and floors, and are artistically furnished in Norwegian style. There is accommodation for 40 patients. The public dining-room, salons, and billiard-rooms are wisely situated at the east end of the building.

At the west end are two substantial and extensive open verandahs. Immediately adjoining the sanatorium is a long roomy shelter having both a north and a south aspect. The sanatorium is heated by means of radiators and is electrically lighted. The sanitary conditions are satisfactory and there is an excellent supply of pure water.

Treatment is conducted in accordance with the best modern principles. The meals are well arranged and the food, in quantity, quality, and variety, appears to be excellent and likely to be attractive to an English palate. As compared with most British sanatoriums of like standing Mesnalien offers distinct advantages as regards expense. The tariff varies from 7*s*. to 9*s*. per day, and includes medical attendance, full board, consisting of three chief meals and two lighter ones, milk whenever desired, separate bedroom, heating, lighting, baths, attendance, and ordinary nursing. The only extras appear to be washing, alcoholic liquors, and special nursing if necessitated, and a charge of kr. 10 (11*s*.)

FIG. 3.

Gjösegaarden Private Sanatorium for Consumptives, near Kongsvinger, Norway.

FIG. 4.

Kornhaug Private Sanatorium for Consumptives, Gausdal, Norway.

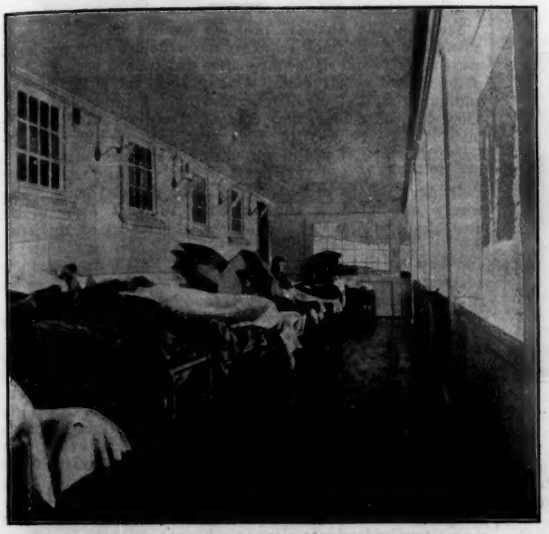
for the disinfection of the patient's room on leaving. Mesnalien is two hours' drive from Lillehammer, which can be very comfortably reached by a particularly interesting railway journey of about five hours from Christiania.[2]

GJÖSEGAARDEN SANATORIUM.

After Mesnalien, among the private sanatoriums restricted to tuberculous cases, Gjösegaarden should be given a prominent place. (Fig. 3.) It is conducted by Dr. Fr. Jonassen who lives with his wife and children in a house on the estate. For some years the sanatorium has been a favourite with both Swedes and Danes as well as Norwegians, and everywhere it is well spoken of. Both the resident physician and his wife speak very fair English and there are no doubt many English patients who would do well here. The sanatorium is situated within half-an-hour's easy drive of Kongsvinger and is only a few miles removed from the Swedish frontier. It can be reached from Christiania in about three hours by a fast train. By leaving Stockholm by the night service Kongsvinger can be reached by early breakfast time. The sanatorium is very pleasantly situated within its own grounds at an altitude of 200 metres above sea level. The surrounding country is fairly typical of the open inland of this district of Norway. Near the sanatorium is a lake of considerable size over which we drove, as it is frozen throughout the winter. Extensive forests are near at hand offering abundant opportunities for sheltered walks. Snow lies on the ground from about November to April but the air is dry and but little wind is experienced. The place was started in 1894 and is steadily growing, additional buildings being added as required. At the time of my visit a new house was nearing completion. At present there is accommodation for 32 patients. Both sexes are admitted and occasionally children are taken. Apparently while under strict medical supervision the patients are afforded as many of the benefits of family life as are desirable.

As far as I could ascertain no prospectus of the sanatorium has ever been issued, its advantages and benefits seeming to have been well recognised by physicians in both Norway and Sweden without any such customary reminder. The inclusive charges are extremely reasonable, ranging from kr. 150 to kr. 180 a month, that is roughly about £8 to £10.

FIG. 5.



Open-air shelter for patients at the Kornhaug Private Sanatorium for Consumptives, Gausdal, Norway.

KORNHAUG SANATORIUM.

This consists of two buildings, a particularly attractive wooden country house, built in old-fashioned Norwegian style, and a new and thoroughly modern building for 29 patients. Altogether something like 38 patients can be accommodated. Dr. W. Holmboe is the physician and resides with his wife at the sanatorium.

The chief features of the new building are shown in the accompanying illustration. (Fig. 4.) Each patient has a separate room, and there is a large *liegehalle* in what may be called the basement. (Fig. 5.) There is a water-closet system and heating is by low pressure steam. The establishment is primarily intended for fairly well-to-do Scandinavians. The inclusive tariff is from kr. 135 to kr. 165, that is to say, from about £7 to £9 a month. The sanatorium is pleasantly placed in its own grounds in Gausdal, an easy drive from Lillehammer which is the nearest town.

GRANHEIM SANATORIUM.

This is a new, well-designed, and simply equipped establishment primarily intended for Norwegians of what might be commonly called the respectable working and lower middle class. (Fig. 6.) It is pleasantly situated amid pines in the mountain valley of Gausdal not far from the country home of Björnstjerne Björnson. It is within easy driving distance of Lillehammer. The medical director is Dr. L. Wiegaard who with his wife and children lives at the sanatorium. A trained nurse is kept. The whole place is light, clean, simple, and attractive, although the patients' rooms are somewhat small. There is a water-closet system and the sewage is dealt with in a septic tank. There are excellent shelters and the outlook is fine. The prices are exceedingly reasonable, ranging from kr. 130 to kr. 135 per month, or a little below and above £7.

FIG. 6.

Granheim Private Sanatorium for Consumptives, Gausdal, Norway.

OTHER PRIVATE SANATORIUMS FOR NORWEGIANS.

At present the number of private sanatoriums in Norway are comparatively few. This is due first to the fact that up to recently Norwegians have been accustomed to seek treatment in Germany or elsewhere, heedless of the specially advantageous climatic conditions which they were forsaking; and,

[2] A full description of Mesnalien Sanatorium appears in the *British Journal of Tuberculosis* for April, 1908.

secondly, the possibility of providing for other than Scandinavian peoples has even yet hardly been realised. Thus the sanatorium movement in Norway must be viewed as in little more than its beginnings. Rightly developed it should have a rich future before it.

In the immediate neighbourhood of Christiania, on the outskirts of the suburb of Grefsen, which can be reached by electric cars, Dr. Mjöen has established a small but well-equipped sanatorium. (Fig. 7.) Adjoining it is another establishment, the Grefsen Sanatorium, originally, so I was given to understand, a hydropathic establishment, but which has been adapted and extended particularly by the employment of a considerable number of scattered shelters.

FIG. 7.

Dr. Mjöen's Private Sanatorium for Consumptives at Grefsen, Christiania, Norway.

Another establishment for Norwegian consumptives, the Trygstad Sanatorium, has been opened by Dr. I. I. Lorentzen, near the little township of Honefos, where cases are taken at from kr. 135 to kr. 165 during the winter months, the prices being a little lower in the summer.

PRIVATE RESIDENCES FOR TUBERCULOUS AND TUBERCULOUSLY DISPOSED CASES.

While the number of sanatoriums suited for English patients is at present limited in Norway, it is well to remember that the climatic conditions, especially during the winter, are so favourable for the treatment of many early and predisposed cases that to those to whom expense is not a serious consideration the advisability of taking a house on the hills immediately outside Christiania or making a home for the winter in the Norwegian highlands is certainly worthy of consideration. Especially in the case of children and rapidly growing youths where marked predisposition from inheritance or acquired conditions exists I can imagine no wiser course than arranging for a winter in the bracing and invigorating climate of this northern land.

For young male adults without home ties, who have a tuberculous inheritance or who are the subjects of an arrested tuberculous affection, a long mid-winter holiday at one of the Norwegian health stations, to which reference has been made in a previous article, offers one of the best means for prophylaxis and the maintenance of quiescence.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE FRIENDLY SOCIETY.—The twenty-fifth annual general meeting of the members of this society was held on May 21st. The report and accounts presented showed that there was an increase of members to the extent of 95 during the past year and at the end of 1907 the total number was 2583, all of whom were male members of the medical profession or licentiates of dental surgery practising in the United Kingdom. The funds now amount to £215,000, including an investment reserve of £11,031. The committee resolved to write down the 3 per cent. stocks held by the society to their present market value. The amount thus credited to the investment fluctuation fund was £3897 14*s*. The amount paid in sickness benefit during the year was £12,700, being the largest amount yet disbursed in one year. The chairman is Dr. F. de Havilland Hall and the secretary is Mr. F. Addiscott, F.I.A., 33, Chancery-lane, London, W.C.

THE BIRMINGHAM PUBLIC ABATTOIR AND MEAT MARKET.

GERMAN AND BRITISH EXPENDITURE: A CONTRAST.—INJURIOUS SURVIVAL OF PRIVATE SLAUGHTER-HOUSES.—OPEN-AIR DRAINAGE.—TRADE BEFORE SANITATION.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

THOUGH the abattoir problem cannot be studied with advantage in England there are nevertheless some wholesale meat markets and slaughter-houses which have been carefully planned and constructed. Among these the public abattoir and meat market of Birmingham hold a prominent place. They are, of course, and comparatively speaking, modern institutions. It was in 1891 that the Birmingham city council spent £42,564 in purchasing a site measuring 12,243 square yards in the very heart of the city and near the old Bullring. Before proceeding to build the city council very wisely appointed a subcommittee to visit some of the abattoirs of Germany. Of course, the report of this committee showed what great progress had been made abroad and how urgent it was to construct in England abattoirs in keeping with the discoveries of modern science. It was not till the year 1895 that the foundation-stone was laid; and the new meat market and public abattoir were inaugurated in October, 1897. The erection and equipment of these buildings had cost £84,424 and adding to this the land and other expenses the grand total outlay was £126,989. If we accept the estimated population of Birmingham to be 522,000, this is less than 5*s*. per head. One of the most celebrated model public abattoirs of Germany is that of Offenbach, which cost £1 13*s*. 7*d*. per head of the population, and Offenbach is not a wealthy and prosperous town like Birmingham. On the other hand, there are no legal powers by which the private slaughter-houses can be closed in Birmingham. More than a hundred private slaughter-houses still remain. Their number is being gradually reduced and no new licences are granted. Thus it is thought that in the course of time they will all disappear, dying a natural death as it were, and so the ratepayers will be spared the cost of giving compensation. In the meanwhile, there can be no efficient guarantee against all the manifest evils that result from inefficient inspection of meat.

If all the private slaughter-houses were to be closed the existing public abattoir, though not yet working at its full capacity, would have to be enlarged so greatly that the cost per head of the population would probably be doubled. Nevertheless, it would even then be less than a third of the German estimate. Therefore, the ratepayers of Birmingham cannot accuse their markets committee of extravagance. Indeed, when we think that the little town of Offenbach, though unknown to fame, has spent, in proportion to its 60,000 inhabitants, six times more upon its public abattoir than the great world-famed city of Birmingham, the complaint, if any, would be not of extravagance but of an unworthy parsimony. At the same time the absence of compulsory powers places the city council at a great disadvantage when compared with German towns where, of course, all private slaughter-houses are closed as soon as a public abattoir has been built. The Birmingham abattoir has to compete with the private slaughter-houses of the butchers and, therefore, to induce the butchers to come to the abattoir the charges made are absurdly low. As a consequence, the revenue of the public abattoir is so small that it is very difficult to make ends meet. According to the Birmingham Corporation Consolidation Act of 1883 and a subsequent modification of this Act dated 1903 the sum which the butcher pays for killing pigs at the abattoir was raised from 4*d*. to 8*d*. and 2*d*. for sucking pigs instead of 1*d*. But this increase though legalised has not been applied and at best it is altogether insufficient. In some abattoirs the charge is more than 2*s*. for a hog. Then at Birmingham for calves the charge is only 6*d*., for sheep 2*d*., and for horned cattle 1*s*. 6*d*. At Marseilles, for instance, it is 1*s*. 3*d* for calves, 1½*d*. for sheep, 2*s*. for hogs, and 2*s*. 10*d*. for horned cattle. No wonder the Birmingham city council has not yet realised that public abattoirs are institutions which have largely contributed not merely to reduce the sick-rate but also the rates and taxes by providing a lucrative source of municipal revenue. In spite, however, of these crippling conditions which have hedged in the enterprise the city of

Birmingham may be congratulated on having constructed a very creditable public abattoir. It does not realise all the modern notions of perfection but it has some sterling merits of its own.

First and foremost there is the system of overhead lairage which is certainly not ideal. As the abattoir is in the centre of the town, where land is extremely valuable and space strictly limited, there was a strong temptation to build more than one floor. But why should the abattoir be in the centre of the town? This is contrary to the spirit of our law which says slaughtering must not be done near dwelling-houses. The reason presumably was that no butcher would go to a public abattoir outside the city, while he was allowed to have a private slaughter-house inside the city and close to his shop. Here again the necessity for compulsory closing powers becomes evident. In the meanwhile the cattle have to be driven through the streets so that they can be killed near the shops where the meat is sold, and this is a nuisance in itself. Then, when the animals enter the abattoir they are made to ascend sloping cattle runs till they come to the first floor of the buildings, where they reach the stabling and part of the drain that may want cleaning, as straw and heavy manure are likely to cause an obstruction. It is indeed the frequency of such obstruction that has suggested the advantage of open drains so that they can be swept constantly and promptly. At regular and short intervals large pipes bring the contents of this first-floor drain to the ground-floor drains which are also open channels running outside the building. The only difference is that a certain number of moveable boards have been provided so that here and there the drain may be covered over where there is much traffic. At one end of the building these open drains discharge into a catchpit built on three levels, with three screens of increasing fineness. Thus all solid matter is stopped till it is removed by hand and does not flow into the sewers. A small trolley follows the line of these open drains in which all accumulations of straw, &c., are thrown and this helps the work of keeping the drain well swept and clean. The chief objection to this system is that the blood being kept above ground it may alarm the cattle, but there is also manure in this drain and any odour like that of a stable has a pacifying effect on these animals.

The Birmingham Meat Market. Reproduction of a photograph kindly placed at our disposal by Mr. W. Caleb Hunt, photographer to the Medical Department of the University of Birmingham.

pens ready for them. The doors of the separate pens are ingeniously contrived so as to fasten back across the passage and thus the animals cannot go farther than the pens allotted to them. There is a hard, water-tight granolithic flooring. This is fluted both for the purpose of providing a better foothold and for draining. Though this flooring is quite water-tight so long as it remains sound it may, and does on rare occasions, crack and let liquid manure down into the slaughter-rooms below. Such a defect could be promptly remedied and has not, I am assured, occasioned much trouble. There is lairage space for 200 cattle and 500 sheep.

The drainage for the lairage constitutes a distinctive feature of this abattoir. Each pen drains into an open channel or gutter which goes straight to the nearest wall and through the wall into the open air. Outside and running the whole length of the wall is suspended a large metal trough or half pipe of about a foot in diameter. This forms a gutter or open drain. Above this there is a metal rope which the men can hold when a ladder is brought for them to reach any

On the Sherlock-street East side there is a row of 20 slaughter-houses which are let to wholesale salesmen. Each of these compartments is large enough to kill and to dress two horned cattle at the same time. They constitute, as it were, private slaughter-houses within the public abattoirs. Of course, this is opposed to modern principles. Though open all the time to inspection they still retain an element of privacy about them that is a survival of the abominations of the past. The 20 separate compartments are supplied with 100 incandescent electric lamps of 32 candle-power each. The fact that there is the lairage above prevents any light coming through the ceiling. The concrete flooring and the glazed bricks of the impermeable wall are excellent, but these do not compensate for the want of a roof with skylights. There ought to be no superstructure. The same may be said of the general slaughter-hall which is not let out to private butchers but where all may come and kill on paying the established charge made per animal. The lairage above has plenty of light and air, for it has a roof and not a ceiling, and the roof is open along the whole

length of its apex. Also the hall for killing hogs has nothing built above. Indeed, it has two roofs running at right angles with each other. The first roof is above the great wooden vats in which the pigs are plunged and scalded to remove the bristles. This causes much steam, so that the roof is not only open along the top but there are three lantern ventilators and a window at the top of the wall at each end. Thus the other side of the hall where the hogs are dressed is not invaded by the steam. The mechanical conveniences for raising the pig are not of the most recent date. This hall is 96 feet by 40 feet and 12 sets of men can work here at the same time. Opposite this part of the building there is a lairage which will hold 200 pigs. Then there is a separate row of buildings for dealing with skins, hides, fat, and there is a tripery. Also there is a small slaughter-house for condemned animals and close by is a place to put meat or carcasses which have been seized pending their removal to the destructor. Finally, this row of buildings contains a boiler-house with two large Lancashire boilers supplying hot water and steam to all parts of the building. This is one of the important advantages of an abattoir. All the cold water or hot water or steam that is needed is to be obtained just where it is required by merely turning a tap. For this purpose a large water tower has been built which has on the top a tank 20 feet deep containing 45 tons of water. Here a whole day's supply can be kept in reserve.

Altogether, and though this is the best abattoir which I have as yet seen in England, it does not come up to the degree of perfection reached in Germany and at Basle in Switzerland. In one respect Birmingham has succeeded in providing itself with every facility and that is in regard to its wholesale meat market. This is situated in the centre of the premises. On the one side there are the 20 separate slaughter-houses with lairages above, and on the other side are the general slaughter-hall and the pig slaughter-hall. From one set of buildings to the other are covered roadways all giving admittance to the great meat market hall. This structure is 365 feet long and 90 feet broad. The walls on each side are 35 feet high and from them starts the roof which reaches a final altitude of 65 feet. So that there is plenty of space, air, and light. 3000 sides of beef can be hung here in the 73 market stands which are divided by two longitudinal and three cross avenues. The great point is the installation of a complete system of overhead travelling rails. There is no such thing as the carrying of carcasses on men's backs. At the spot where the animal is killed it is affixed to a roller hook. A slight push suffices to make it glide along suspended from the overhead rail and, with the aid of switch-points, to any part of the building or to the lifts where, without being unhooked, it may be taken down to the chill rooms or cold-storage rooms which are in the basement. Undoubtedly there is here every facility for trading but less care has been taken to secure a remunerative return for the city revenue and to aid the work of the meat inspectors. If a butcher sees something suspicious and does not at once notify the inspector he may be prosecuted if the fact is found out. With so many private slaughter-houses and so few inspectors the chance of detection is not so very great. Therefore there still remains much to be done before the inhabitant of Birmingham can feel quite safe when he sits down to a meat dinner.

THE TWENTY-FIFTH CONGRESS OF INTERNAL MEDICINE.

(FROM OUR VIENNA CORRESPONDENT.)

(Concluded from p. 1571.)

Cardiac Pathology.

THE Pathology of the Heart was the topic of several papers read on the second and third days of the Congress. Dr. WACHENFELD (Nauheim) spoke on the subject of the Cardiac Circulation in Normal and Diseased States. He said that the heart was only a force pump which had to supply the whole body with blood and thereby with oxygen, whilst the nutrition of the cells was supplied by the lymph current. If the heart was diseased the extent of its contraction was lessened, the circulation was hindered, and the supply of oxygen to the tissues was diminished. Great differences of the intracardiac pressure could not exist on account of the gradual failing of the valves. The danger of heart disease lay only in the fact that the volume of the cardiac contraction might become too small for the needs of the body. As much relief as possible was desirable for a diseased heart; active gymnastics were altogether out of place but passive movement and massage were indicated so as to favour the lymph flow.

Professor SCHOTT (Nauheim) said that he had made observations on wrestlers who were asked to wrestle till dyspnœa appeared. Orthodiagraphic pictures which were then taken showed that their hearts were considerably dilated. In the course of his investigations he ascertained that even normal hearts might become permanently dilated as the result of great muscular exertions. Modern methods enabled it to be proved that if over-exertion was carried to the point of producing obvious palpitation and dyspnœa it might bring about acute dangerous dilatation of the heart.

Professor WEISS and Dr. JOACHIM (Königsberg) showed an apparatus called the Phonoscope which reproduced the heart murmurs and sounds. It consisted of a thin membrane on which an extremely light glass lever was mounted. The movements of the lever were photographed, together with a scale showing hundredths of a second, and if necessary the movements of the carotids were photographed as well. The differential diagnosis between accessory murmurs, anæmic murmurs, and true cardiac murmurs was an easy matter by this method. The sounds of the heart could be made audible to a meeting by means of a telephone. Special instruments traced the photographic curves and produced varying resistances for an electric current which was transmitted to the telephone and caused vibrations of the sonorous plate. By means of this apparatus the sounds of the heart of a fœtus in utero were reproduced.

Diseases of the Alimentary Canal.

A special section of the Congress was devoted to the consideration of the Diseases of the Alimentary Canal. Professor SCHMIDT (Halle) opened the discussion on this subject. In speaking of the latest methods of examination of the function of the intestines he emphasised the value of fermentation, the necessity of a certain diet before beginning the examination, and the value of exact chemical analysis both of the test meal and of any vomited matter.

Dr. PLÖNIES (Dresden) remarked that the intestines had the function of killing the bacteria ingested with the food. The increase of the microbial flora and fauna in diseased gut was the best proof of this action. In a good many diseases the degree of returning health was gauged by the quantity of bacteria still present.

Dr. J. SCHÜTZ (Vienna) read a paper on the Examination of the Functions of the Stomach of Infants, a subject which he said had been rather neglected during the last few years. He had proved that the diagnostic importance of free hydrochloric acid was *nil* and that the mobility of the stomach was the factor to be examined. The investigation of the extent to which fermentation took place in that viscus in infants gave a valuable clue to the chemical reactions in their stomachs.

Professor MORITZ (Strasburg) and Professor LENHARTZ (Hamburg) spoke on "Colica Mucosa"; the pathology was not quite clear but the best treatment was a rich vegetable diet. Professor VON NOORDEN (Vienna) and Dr. MÜNZER (Prague) said that they had obtained very satisfactory results from this diet.

Dr. BRUGSCH (Berlin) and Dr. DAPPER (Neuenahr) said that they concurred with Dr. Schmidt's view that constipation was often due not so much to insufficient metabolism as to a too high degree of digestion, so that all the food was used up and the products of disintegration were only present in small quantities.

Dr. OBRASTZOW (Kiev) made some remarks on Appendicitis. He recognised two distinct divisions of the disease—namely, (1) the sero-fibrinous or benign type, with vomiting, flatulence, constipation lasting from two to five days, and formation of an abscess on the fifth or sixth day; and (2) secondary appendicitis of a septic type, with the above-mentioned symptoms superimposed on it. This type was often consequent on a common primary appendicitis and the prognosis was serious.

Professor LORENZ (Graz) spoke on Intestinal Diseases due to Infection with Amœbæ. He said that his experience led him to suspect the presence of amœbæ in many epidemics the cause of which could not be traced. Copious irrigations and careful disinfection of the bowels had given him good results with the patients whom he treated in his hospital.

Pathology of the Nervous System.

During the last two days of the Congress some papers were read dealing with the Pathology of the Nervous System. Dr. S. FRÄNKEL (Vienna) read a paper on the Chemistry of the Brain. He said that he had found three different kinds of lipoids in the brain substance—namely, cholesterins, saturated phosphatids, and unsaturated phosphatids. The last named contained a carbohydrate, galactose; the phosphatids were the oxidisable part of the protoplasma. The proportion of albumoids and lipoids in the brain increased with the increasing development of the animals. The human brain was especially rich in lipoids which formed two-thirds of the dried brain substance. Dr. Fränkel had found differently constituted bodies of phosphatids in different organs; he had isolated similar bodies not only from the brain but also from the pancreas, human milk, the skin, and the egg of the hen.

Dr. ERBEN (Vienna) discussed the Differential Diagnosis of Sciatica and Similar Affections Producing Pain in the Leg. He had found that if a patient said that he could not cough or sneeze without increasing the pain in the leg, this was pathognomonic for sciatica; when the patient was asked to bend down his body very low, a stiffness of the lower part of the vertebral column was visible even in maximal flexion. This was caused by muscular fixation, produced by pain, and was also pathognomonic.

Dr. BUM (Vienna) described his infiltration treatment of sciatica. He injected a sterile solution of chloride of sodium of 0·7 per cent. strength into the nerve below the gluteal muscles, where it crosses the flexor cruris. He treated 105 cases, with 62 per cent. of permanent recoveries and 21 per cent. of cases of considerable improvement. He injected about 10 cubic centimetres of solution from three to five times. Subacute and chronic cases had been treated with success, but only peripheral sciatica was influenced. No bad after-results had hitherto been observed.

Physiology and Pathology.

Dr. HORNER (Vienna) read a paper on the Blood Pressure in Nephritis. In this disease he advised the adoption of a diet containing no chloride of sodium. Along with Professor Pal he examined a great many hospital patients suffering from this condition. The patients felt much better under the above-mentioned diet, the blood pressure and anasarca diminished, and the urine was free from casts comparatively soon.

Dr. BÖNNIGER (Pankow) made some remarks on the Physiology and Pathology of Respiration. He said that the elasticity of the lungs could be neglected in comparison with the mobility of the chest walls. In emphysema, therefore, the abnormal immobility of the thoracic cavity must be corrected by gymnastics and passive movement.

Dr. GRUBE (Bonn) discussed the Formation of Sugar in the Animal Body. He had discovered that the liver could only turn the fatty acids into sugar. The organism was capable of synthetic action in forming a substance having a large molecule (glycogen) from substances having smaller molecules.

Dr. PFEIFFER (Wiesbaden) read a paper on the "Glandular Fever" (*Drüsenfieber*) which he discovered several years ago. He said that the patients fell ill in the evening, high pyrexia set in, there was pain in swallowing, and there were some swollen glands behind the sterno-mastoid muscle. The affection soon disappeared. The liver and spleen were also sometimes affected. The pathology was not yet fully explained. Anti-influenzal treatment was beneficial.

A few papers dealing with Hæmophilia were read by Dr. MORAWITZ, Dr. LOSSEN (Heidelberg), and Dr. PICK. They all found that the coagulability of the blood in these cases was from three to seven times less than in normal individuals.

After a summary of the proceedings by Dr. MÜLLER, the President, a vote of thanks was passed to the organising committee; a grant of 500 marks was made to the Robert Koch Fund; and Wiesbaden was selected as the place for the next Congress.

In connexion with the Congress there was arranged in the University a remarkable medical exhibition in which all modern medical and surgical requisites were on view. The latest developments of x ray outfits, electrical appliances, hot-air apparatus, and modern pharmacy offered themselves for inspection. Renier and Co. showed a series of accessories which can be fixed on any microscope, converting it into an ultra-microscope; the price is very moderate (about £2 2*s*.). Pounds and pounds weight of strychnine, cocaine, morphine, and other alkaloids were exhibited in glass cases. Samples of compressed medicines and tablets, water charged with radium emanation for bathing and drinking purposes, soups and beverages for invalids, and caffeine-free coffee were distributed to the visitors. Taken altogether the exhibition was most interesting and admirably illustrated the extensive ramifications of modern medicine.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Hospital Saturday Fund.

THE "Hospital Saturday and Convalescent Homes Fund, Incorporated" of Manchester and Salford has received a munificent contribution from Colonel W. W. Clapham of £5000 for distribution among the local medical charities. From this fund the Royal Infirmary and its branch, the Barnes Convalescent Hospital, receive each year towards their maintenance about £600. Mr. W. Cobbett, the chairman of the infirmary board, in a fresh appeal for financial help for the new infirmary, claims on behalf of the board that the erection of a new Royal Infirmary, with double the bed accommodation of the old one, calls for "special recognition by the workers, to whose benefit, and to that of their families, the institution is dedicated." He pleads for a systematic weekly collection "among the employees of every business establishment in the district." One penny a week from each would bring in a large sum. The workpeople of three establishments have already contributed £279 and several smaller sums have been received. Manchester and district are wealthy and charitable but there is evidently a good deal of anxiety as to the future maintenance of the new infirmary which requires £100,000 for its completion and an additional £12,000 a year for its maintenance. It is impossible to think that Manchester will fall short of its duty and its privilege of responding freely to the appeal for help for an institution so beneficial to both rich and poor.

The Pollution of Rivers.

From the report to the Ribble Joint Committee from its chief inspector, Mr. Halliwell, it seems likely that further steps will be taken towards the purification of manufacturers' trade liquids. He stated that members and staff of the Royal Commission had visited several works in the watershed and he had recently been informed that at an early date they proposed to consider the means available for purification. It has been stated that the President of the Local Government Board intended at an early date to introduce a Bill dealing with river pollution on the lines suggested by the Royal Commission on Sewage Disposal in its interim report of 1903. It is to be desired that this matter, in all its bearings, should be well considered and thoroughly dealt with. The filthy and disgusting condition of a large proportion of our rivers and streams is a national evil and so disgraceful to a people supposed to represent one of the highest types of civilisation that efforts to remedy it should be raised far above the level of political strife and should be considered solely as a national question.

Good Record for Rochdale.

It is pleasant to be able to say anything good, even if only occasionally, about sanitary matters in our manufacturing towns. The death-rate in Rochdale from consumption 50 years ago was 3·55 per 1000 and has gradually declined to 1·29 per 1000, the average for the last five years. This, calculated on the present population, means that 200 lives per annum are saved from this disease alone. It is worth noting that 30 per cent. of the deaths from consumption occurred in back-to-back houses and that 41 per cent. of the deaths of infants took place in these ill-ventilated dwellings. The great reduction in the death-rate from consumption warrants the hope, the medical officer thinks, of the future extermination of the disease, but if this is to be accomplished he suggests that notification of the disease must be compulsory.

The late Dr. C. J. Cullingworth.

The late Dr. C. J. Cullingworth was so long connected with Manchester and was so happy here in his professional and social life that his loss will be felt by many who still think of him as a friend. He came to Manchester with

a good reputation which his residence here only confirmed. His first appointment in Manchester was to one of the resident positions in the Royal Infirmary, where he won the respect and regard of the honorary and internal staff. One who knew him well bears testimony to his ardent and persevering pursuit of his profession, a never-ending pursuit, as "knowledge grows from more to more." But with all his eagerness for knowledge there was accompanying it a cheerful, kindly geniality which endeared him to his many friends. His was a busy well-spent life which some of us might well take as an example to follow.

May 26th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Dinner to Sir Percy Girouard: The Liverpool School of Tropical Medicine.

THE High Commissioner for Northern Nigeria (Sir Percy Girouard) was entertained on May 21st to a dinner given at the University Club by Sir Alfred Jones, President of the Liverpool Chamber of Commerce and chairman of the School of Tropical Medicine. Mr. H. Cotterell, the chairman of the African Association, proposed the toast "Success to the Liverpool School of Tropical Medicine," to which Sir Rubert W. Boyce responded. He said that owing to the splendid initiative and energy of Sir Alfred Jones tropical medicine had become an imperial and world medicine, and the impetus given to research in tropical diseases had reacted in research on such diseases around us as measles, whooping-cough, and influenza. The Liverpool and London schools had been imitated in many parts of the world and in this connexion he mentioned that his old colleague Dr. Todd of Montreal University was about to receive the honorary degree of D.Sc. of Liverpool University. They in Liverpool were now engaged in founding a memorial to their friend the late Dr. J. E. Dutton, the brilliant discoverer of the cause of sleeping sickness, who gave his life entirely to research and died in Africa. The fund was now within £200 of £7000 and he appealed for further contributions to raise it to £10,000.

The late Mr. John Newton, M.R.C.S. Eng., L.S.A.

The death of Mr. John Newton occurred on May 17th, at an advanced age. The deceased retired from active practice several years ago. He was a most versatile personality and gave many formal proofs of his capacity and of his varied competency. He was twice President of the Liverpool library. He was President of the Literary and Philosophical Society and also of the Biological Society and the Microscopical Society. He was also vice-president of the Liverpool Medical Institution and of the Art Club. A native of Nottingham, the late Mr. John Newton came to Liverpool in 1849 as resident apothecary to the Royal Infirmary and its adjunct the old asylum in Ashton-street (now a part of the University of Liverpool). The fact that he was gold medallist of the Society of Apothecaries no doubt helped him to obtain that post. Mr. Newton was a great favourite with his *confrères* in the medical profession and had a keen sense of humour. In later years he took a great interest in advanced religious thought and its pulpit manifestations. Amongst the papers read by him before the Literary and Philosophical Society were the Senses and their Relation to Each Other; Recent Discoveries as to the Origin and History of the Human Race; the Mystery of Life, &c. Mr. Newton was twice married and leaves a widow and two sons.

The Birth-rate in Cheshire.

Mr. Francis Vacher (medical officer of health of Cheshire) in his annual report made some interesting statements as to the birth-rate of the county. At Neston and Parkgate the birth-rate was 39·3, at Ellesmere Port and Whitby 35·2, at Lower Bebington 32·4, at Runcorn 30·1, whereas at Bowden it was only 13·2 per 1000. The great difference between the highest and lowest of these figures, in view of the peculiar position of the districts named, is very striking, and he has no comfort to administer to those who look with alarm upon the decreasing national birth-rate. During 1907 the birth-rate in Cheshire was 2·5 below the unprecedentedly low birth-rate of the whole country, while the death-rate was 1·4 below the unprecedented death-rate of the whole country.

May 26th.

NEWCASTLE-UPON-TYNE.

(FROM OUR OWN CORRESPONDENT.)

University of Durham Bill, 1908.

ON Monday in last week a Bill "to make further provision with respect to the University of Durham" was introduced into the House of Commons by Mr. T. W. Hills, the Conservative member for the city of Durham. The Bill was supported by the Minister for Education, Sir William Anson, and others. The Bill consists of eight clauses and provides for the appointment of Commissioners whose duties shall be "to make statutes regulating the constitution of the University of Durham and the powers and duties of its various authorities and constituent bodies and the disposition of its existing property" in general accordance with the scheme scheduled as an appendix to the Bill subject to any modifications of detail which may appear to the Commissioners to be expedient after considering any representations which may be made to them by or on behalf of any person or body directly affected. The statutes made by the Commissioners shall not be valid until they have been approved by the King in Council.

Before referring to the scheme as scheduled in the appendix it will be better probably to give an outline of the present mode of government of the University. At the Reformation the Dean and Chapter of Durham were endowed by Henry VIII. with the revenues of the Benedictine Priory of Durham, and from that monarch they also received the advowsons and other endowments of a college in Oxford which was connected with the Priory church of Durham. This college had been in existence before his times but was handsomely endowed by Bishop Hatfield who died in 1381 and whose memory is still preserved in "Hatfield Hall," Durham. On account of its connexion with the Priory of Durham this college was dissolved at the Reformation and its property was transferred, as stated above, to the Dean and Chapter of Durham. This latter body is therefore the representative of the ancient college as well as of the priory. It was not until the reign of William IV. that a scheme of education in connexion with the Cathedral church was brought forward. In the year 1832 the then Bishop of Durham, in conjunction with the Dean and Chapter, proposed the foundation of a University in connexion with the Cathedral. The Chapter undertook to lay aside £3000 per annum for this object, and the Bishop provided for the warden, the professor of divinity, and the professor of Greek by attaching prebendal stalls to the several offices. An Act of 1832 gave authority to the above propositions and empowered the establishment of a University in connexion with the Cathedral church. The government was vested in the Dean and Chapter and the University was to be subject to, and under the jurisdiction of, the Lord Bishop of Durham for the time being as the visitor thereof.

In 1835 a statute was passed by the Dean and Chapter approved by the Bishop intrusting the ordinary management of the University under the Bishop as visitor and the Dean and Chapter as governors to the warden, a Senate, and a Convocation. The Senate is composed of the warden, the professors of divinity, Greek, mathematics, and Hebrew, the two proctors, the heads of University College (Hatfield Hall), the College of Medicine, and Armstrong College (formerly the Durham College of Science), and six other members of Convocation; 17 persons in all. By an Order in Council of 1841 it was provided that the office of warden should in future be permanently annexed to the deanery of Durham and a canonry in the Cathedral church was annexed to each of the professorships of divinity and Greek. It is obvious, therefore, that the connexion between the Cathedral and the University is a very close one indeed and the above very brief historical sketch will show how it has come about. However, since the establishment of the University some 80 years ago new branches of learning have to some extent replaced the older subjects of classics, mathematics, and theology, and so important has the part played by the Newcastle division of the University become that it was desirable that the latter should have more representation in the government of the University. At the present moment the University of Durham consists of the Colleges in Durham—the Durham division of the University—the College of Medicine and Armstrong College in Newcastle-upon-Tyne. The Durham division still provides education and residence on the lines of the older Universities of Oxford and Cambridge.

Armstrong College is on the lines of other modern provincial Universities and grants degrees in science and literature and courses of instruction for teachers in secondary schools.

The schedule accompanying the Bill which was introduced to Parliament last week provides for fundamental changes in the government of the University. The Bishop of Durham will remain, as heretofore, the visitor. The office of warden is to be done away with and a Chancellor is to be appointed who shall be the head and chief officer of the University. The first Chancellor is to be the present warden. Succeeding Chancellors are to be appointed by the Senate. Hence the Order in Council of 1841 by which the office of warden was to be permanently annexed to the deanery of Durham is superseded. The head of the University and the head of the Cathedral church may thus in the future be different persons.

Another change of great importance which is proposed in the Bill is that provided by Section III. of the schedule which relates that "The office and powers of the Dean and Chapter of Durham as governors of the University shall cease as soon as this scheme comes into operation." And Section V. states that "Senate shall have entire control of the real and personal property henceforth to belong to the University," &c. The future Senate is to be composed as follows: The Chancellor, six Crown nominees, the dean (provided he be not Chancellor), the professors of Greek and Divinity who also hold canonries, and such number as is necessary to make six in all to be appointed by the council of the Durham Colleges, six persons appointed by the teaching staff in Durham, and six by Convocation; four persons by each of the following—viz., the College of Medicine, the council of Armstrong College, and the professors of Armstrong College; 37 persons in all.

The object of the Bill is therefore to take the government of the University out of the hands of the Dean and Chapter and to transfer it to a body which is more representative of the different interests of the University than the present Senate. The main object of the Bill has met with the approval, in almost all cases, of those who are connected with the University, though some difference of opinion exists as to certain details contained in the schedule. With regard to the College of Medicine, for instance, it will be noticed that while it has on the present Senate a representation equal to one-eighth the total number, on the new Senate its representation is to be somewhat reduced—viz., one-ninth. On the other hand, the representation of Armstrong College at present is one-sixteenth, but on the new Senate its representation will be between three and four times as great as this. It is argued on behalf of Armstrong College that as the money expended is so much greater and the teaching staff is larger than at the College of Medicine, so its representation should be greater. The authorities of the College of Medicine, however, refuse to accept that argument and claim equal representation with Armstrong College on the ground that they are of longer standing in the University and that the work to be done in a medical college is quite as important as, if not more important than, the work done at Armstrong College. This and such like questions are, however, matters of detail and provision is made in the Bill for the Commissioners to hear such objections. There can be no doubt that if the principle of this Bill receives the Royal Assent the University will benefit in very many ways and the change will be enormously for the good of higher education in the North of England.

May 26th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

State Medicine and Poor-law Relief.

THE Royal Commission which in 1871 recommended the appointment of medical officers of health expressed the opinion that it was desirable, so far as possible, to utilise the services of Poor-law medical officers for sanitary purposes. Of late years there has been a tendency to separate the work of the sanitary officer from that of the district medical officer to an extent that has not always perhaps been justified. In an instructive paper by Dr. A. D. Edwards, assistant medical officer of health of Newport, which was read at a recent conference of Poor-law authorities held at Llandilo, the proper relation of these two branches of State medicine was discussed. Until quite recently Dr. Edwards was the resident medical officer to the Cardiff workhouse and he stated that in July of last year there were in the sick wards of that institution 335 adult males, of whom 237 were permanent paupers. Of this number 21 were consumptives and in the treatment of this class of cases several difficulties were pointed out. Isolation in an early stage of the disease was difficult because consumptive patients were notably sanguine, and this fact, together with the reluctance of the poor to seek admittance to the workhouse infirmary, resulted in many patients remaining at home to become a focus of infection for the rest of their family. A further difficulty, but one much easier of being remedied, was the lack of proper accommodation in most workhouses leading to the treatment of advanced consumptives in general wards to the great disadvantage not only of themselves but of the other patients. Dr. Edwards insisted very strongly upon the importance of removing children from the surroundings of the workhouse to the greater home life of cottage homes. From an economic standpoint he considered that it was desirable, because the bringing up of weak and ailing children in healthier surroundings would produce among them a far greater proportion of healthy and self-supporting adults than was possible under the system of treatment in an institution.

Cardiff Port Sanitary Authority.

The port sanitary authorities have been well described as representing the first line of defence in our sanitary organisation and the efficiency of these outposts is very forcibly brought home in the annual report of Dr. Edward Walford to the Cardiff authority. The seven inspectors who comprise the staff of the port medical officer of health are on duty in rotation at two of the Cardiff docks as long as the dock gates are open and at two docks by day and by night. All vessels are boarded on arrival, whether foreign or coastwise, and inquiries made as to the health of the crew, and if there has been any sickness on the voyage a copy of the regulations as to infectious diseases is handed to the master. During 1907 the number of vessels entering the port was nearly 12,000, with an aggregate tonnage of nearly 7,000,000. About two-thirds of the vessels are coastwise. Altogether 8629 vessels were specially inspected and defects were found in 25 per cent. of the steamships and in 37 per cent. of the sailing ships arriving from foreign ports. Of the coasting vessels inspected defects were found in 11 per cent. of the steamships and in 8 per cent. of the sailing ships. The chief defects were connected with the lighting and ventilating, water-tanks, leaking decks over bunks causing damp beds, and many water-closets were found defective. The bacteriological examination of water-supplies has been continued in the Public Health Laboratory. Dr. H. A. Schölberg examined altogether 100 samples of drinking water taken from vessels entering the port during 1907. He describes 51 samples as impure, ten as fair, and 39 as good. Of the 90 samples examined in 1906 there were seven very impure, 48 impure, 24 fair, and 11 good. The usefulness, indeed the absolute necessity, of the Public Health Laboratory was emphasised in another direction. In October several dead rats were found in the hold of an Italian vessel that had come from Rotterdam. The rats were examined by Dr. Schölberg but happily with a negative result.

May 26th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Secretary of State for War in Edinburgh.

THE Secretary of State for War, who was in Edinburgh on Thursday, May 21st, took the leading part in two interesting meetings. The first meeting was held in the Royal Infirmary for the purpose of presenting prizes to the nurses who had taken the highest places in the classes which they attend as part of their training. Invitations had been issued to the managers and staff for half-past four o'clock tea and this was provided in the garden of the nurses' home. The weather fortunately was fine and there was quite a representative gathering present to receive Mr. Haldane. At half past five the invited guests made their way to the large surgical theatre, the centre part of which was wholly filled with nurses in their infirmary uniform. The Lord Provost, who is chairman of the infirmary board of management, occupied the chair. He explained the object of the meeting and asked Mr. Haldane to present the prizes. Mr. Haldane

then addressed the nurses, dwelling upon the important part which they took in the modern treatment of disease. Lord Salvesen moved a vote of thanks to Mr. Haldane and referred to their indebtedness to Miss Haldane who is a lady manager for getting her brother to add this to his many labours. In the evening Mr. Haldane addressed a large meeting in the McEwan Hall on that part of his army scheme which dealt with the officers' training corps. This is not the place to follow Mr. Haldane's exposition but it may be said that he appealed to the students of the University to help him to realise his scheme. Principal Sir William Turner presided and was accompanied to the platform by many representatives of the army, of the Volunteers, and of higher and secondary education.

Edinburgh Post-Graduate Vacation Course.

The syllabus for this course is now completed and can be obtained on application to Mr. Stirton at the University New Buildings, Edinburgh. The course extends this year from August 31st to Sept. 26th. An auxiliary to the course is to be run this year from August 17th to 28th and is to be confined to methods of diagnosis, which includes such subjects as the examination of the urine, diseases of the ear, nose, and throat, bacteriological methods, and blood examination, &c.

The Lord High Commissioner at Holyrood.

With the meeting of the assemblies of the Scottish Churches the Lord High Commissioner (Lord Kinnaird) holds court at Holyrood Palace. As is the custom at this time the representative of His Majesty pays a formal visit to the various medical hospitals in the city, while the University and the Royal Colleges are formally received by him at Holyrood.

Northern Infirmary, Inverness: the Admission of Cases of Pulmonary Tuberculosis.

The annual meeting of the managers of the Northern Infirmary, Inverness, was held on May 6th. It was moved and seconded:—

That the managers resolve not to receive patients suffering from phthisis into the infirmary after Nov. 6th next unless one ward for males and one for females are equipped for the treatment of such cases exclusively and isolated to the satisfaction of the medical staff from the other wards in the infirmary.

The secretary intimated that this matter had been before the house committee and he announced that he had received notice that day of a legacy of £1700 for the treatment of cases of phthisis. It was then proposed as an amendment:—

The meeting having heard from the secretary the cause of the delay in the house committee carrying out the remit with reference to a ward for phthisis cases and that as this cause was now removed enjoin the committee to report as soon as possible.

The following amendment was also proposed and eventually became the finding of the meeting:—

That it be remitted to the house committee to consider and report to a meeting of the managers to be summoned this day two months hence as to what arrangements, in view of the financial assistance now reported, can be made at the infirmary for the receiving and treatment of patients suffering from consumption in its earlier stages.

May 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal College of Surgeons in Ireland.

THE officers of the College are understood to be working hard to induce the Grand Committee, now in charge of the Irish Universities Bill, to consider the claims of the College as set out in the leading article of THE LANCET last week. The voting papers for the election of President, Vice-President, Council, and secretary of the College, which will be held on Monday next, June 1st, have been issued to the Fellows. The Vice-President, Mr. John Lentaigne, will probably succeed the retiring President, Sir Henry R. Swanzy, and will be himself succeeded in his present post by Mr. Robert H. Woods. In addition to the members of the existing council who offer themselves for re-election the list of candidates includes the following names: Louis A. Byrne, F. T. Porter Newell, H. Benson Goulding, Thomas E. Gordon, G. Jameson Johnston, Thomas O'Connell Redmond, Andrew Charles, and R. Atkinson Stoney. Some of these have been members of the Council at former dates. The members who seek re-election are Sir Henry R. Swanzy, William Stoker, Sir Charles A. Cameron, Sir Lambert H. Ormsby, Richard D. Purefoy, Henry Gregg Sherlock, Sir Charles B. Ball, John B. Story, John S. McArdle, D. Edgar Flinn, Sir Thomas Myles, Thomas Donnelly, Sir Arthur Chance, Richard Lane Joynt, R. Bolton McCausland, Edward Henry Taylor, William Taylor, R. Charles B. Maunsell, and William Ireland Wheeler.

The National Fund for Nurses in Ireland.

On Monday, May 25th, the Lord Lieutenant presided, in the absence of Lady Aberdeen, at the annual general meeting of the supporters of this fund, which was held at the College of Surgeons. His Excellency having said, in words which were heartily applauded, that "on no occasion during the past two and a half years had Lady Aberdeen been absent when it had been physically possible for her to be present to keep any engagement," Canon Mahaffy proposed that the following be elected as members of the council: Miss Mary Blunt, Miss Boland, Miss MacDonnell, Miss Lamont, Sir Francis R. Cruise, Richard Dowse, T. A. O'Farrell, Marcus Tertius Moses, Sir Lambert Ormsby, and Sir William Thompson. Sir Lambert Ormsby proposed with his usual eloquence a vote of thanks to Lord and Lady Aberdeen for their services in behalf of the fund and the motion was adopted enthusiastically.

The Universities Bill.

An important discussion of some of the provisions of the Bill took place on the occasion of the last meeting of Convocation of the Royal University at the University Buildings, Earlsfort-terrace, Dublin, a significant feature being the prominence of the part taken by medical men in the debate. Dr. J. C. McWalter proposed:

That we extremely regret that no provision is made in the proposed Irish University Bill for extern students, who will now be obliged to attend lectures in some of the affiliated colleges, and that this will press very severely and oppressively on female students.

An amendment was suggested by the Very Rev. Father Delany, S.J., that the exclusion of extern students should not be enforced for at least 10 years—instead of five as proposed in the Bill—from the date of the dissolution of the Royal University. This amendment was accepted by Dr. McWalter and carried by a large majority. All the constituent sects and governing bodies of both the passing Royal University and the future new University in Dublin appear to be unanimously of the opinion that the financial provisions must prove inadequate. The preponderance of the medical element in the new University in Dublin is a feature which has been a good deal commented on, while it is pointed out that the present Provost of Trinity College, Dublin, is the first medical man who has been promoted to that enviable position; that Dr. B. C. A. Windle, the President of the Cork College, is a medical man; and that Dr. D. J. Coffey by his recent election has come to complete the (perfect) number of three medical Presidents!

Women's National Health Association: Kingstown Branch Opened.

The Women's National Health Association made another step forward on May 12th when the Kingstown branch was inaugurated by the Countess of Aberdeen at the town hall, where the Registrar-General, Sir Robert Matheson, was in the chair, and amongst the large company present were: the Rev. Canon Murphy, P.P., Kingstown; Mr. N. V. McCormack, chairman of the urban council; Sir Thomas Robinson, the Very Rev. Canon Murray, the Rev. Father Lockhart, Colonel Beamish, and Mr. R. A. O'Donovan, superintendent officer of health. Lady Aberdeen, who was received with enthusiasm, pointed out that now the teachers of all the schools—national, secondary, and industrial—were being trained to be able to give instruction about tuberculosis. She proceeded to urge on the assembly the necessity of visiting working men's homes and teaching them the importance of cleanliness, fresh air, and suitable food for the healthy rearing of their children.

Anti-tuberculosis Campaign: Proposed Sanatorium for Dublin.

The report of the subcommittee of the Dublin Joint Hospital Board on the selection of a site for a proposed sanatorium for the treatment of tuberculosis has just been issued. Sites had been advertised for and were inspected by the committee which then requested Professor E. J. McWeeney to inspect and to report upon four of those, which he accordingly did in company with the veteran sanitarian Sir Charles

A. Cameron, F.R.S. The sites inspected were: Johnville, Saggart; The Shanty, Lynch Park and Slievethoul, Brittas; Glenarmeen, Brittas; and Larch Hill, Rathfarnham. In the course of his report Professor McWeeney does not fail to indicate every feature of modern scientific discovery which can be made to illuminate the dark ways of tuberculosis and every weapon which modern progress has furnished for resisting and destroying the enemy. Dublin has specially strong claims to a leadership in this direction; not only is it the metropolis of a nation specially victimised by "the great white plague," but it has produced curiously prophetic forecasts of modern discovery and modern practice in this very department. In the year 1726 there was printed in Dublin a small octavo "Treatise on a Consumption of the Lungs," by Edward Barry, M.D., which contains the following pathological disquisition:—

Ulcers in the *Lungs* when narrowly viewed with *Microscopes*, are covered with several *Insects*, and from thence concludes that they take their first Origine from such *Animalcules*, which being inspired with the Air, fix their Situation on the *Lungs*, and erode and ulcerate the *Vessels*: and from the same irregular way of Reasoning, these Animalcules have been by others supposed the Cause of several Distempers, and particularly such as are *contagious*: But these Appearances may be easily accounted for, as the unavoidable Effects, not the Causes of these Diseases: For it is certain that there is almost an infinite Number and Variety of such *Animalcules* perpetually floating in the Air, whose chief Business consists in searching out a Place where they may find Nourishment, and a proper Situation for themselves and their young.

What an amount of re-discovery would have been saved by not losing sight of these views of more than a century and three-quarters old! In the course of his report Professor McWeeney tabulated the features which he considered of the greatest importance in the selection of a site for a consumption sanatorium and concluded that the Larch Hill site impressed him more favourably than any of the others. He summed up thus regarding the merits of the position which was decided to be most eligible:—

The advantages of Larch Hill are as follows: (1) it is already a sanatorium; (2) patients are sent to it by medical men, from which it must be implied that medical opinion was in favour of the site; (3) very little is required to render it fit for the immediate reception of patients, and the extension of chalets as required can be easily carried out; (4) a portion of the site has a rather southerly aspect; and (5) there is a good water-supply.

With an ideal site and other desirable sites at disposition there should not be much further delay in selection. A metropolitan sanatorium, fortified with all the up-to-date resources of modern science, should maintain the traditions of the Dublin School of Medicine in the therapeutics of chest disease as handed on by Graves and Stokes and Corrigan.

Health of Belfast.

Samples of cockles collected on both sides of Belfast Lough having been sent to Professor W. St. Clair Symmers for bacteriological examination he has found in them, as might be expected owing to the fact that Belfast Lough is now a vast open sewer, undoubted excretal bacteria and he has reported that "none of the samples can be regarded as wholesome." Notices have been posted throughout the city warning people against eating cockles. Many of the shell-fish exported from Belfast to Scotland are used, it is said, for bait in fishing. The medical officer of health of Belfast has written to 115 rent agents, requesting them to state if they were prepared to recommend to the owners of house property the abolition of ashpits and the substitution of ashbins therefor, the corporation to supply the bins and to be responsible for their maintenance and the owners to pay the corporation the sum of 1*s.* per year for each ashbin supplied. 43 replies had been received, 20 in the affirmative, 12 in the negative, and 11 conditional. Those who have not replied are to be again written to.

The Belfast Abattoir.

The present Belfast abattoir is admittedly unsatisfactory and the recent Health Commission reported that "in view of the present surroundings and the restricted and inefficient accommodation now available, more especially for the slaughtering of sheep, the corporation should at the earliest possible moment take steps to provide a more modern and commodious abattoir on a more suitable site." The market committee has been trying for years to get a sanitary abattoir built and it has recommended that one should be erected on the site of the present horse fair, vegetable market, pork market, and portion of the flax and fruit and live fowl markets, these markets to be held in other places as decided. This recommendation came before the city council of Belfast in committee on May 20th. An amendment in favour of another site was lost, but when the original motion in favour of the suggestion of the market committee was proposed it was lost, and so, owing to the deadlock, matters remain *in statu quo*.

May 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Remarkable Medical Evidence in the Case of an Alleged Murderess.

DURING the last two weeks public opinion has been greatly excited all over France in connexion with a criminal trial which has induced almost every newspaper to criticise the official medical experts in terms the reverse of flattering. The accused was a woman named Jeanne Weber who was first arrested in 1905 and tried before the Cour d'Assises in circumstances which created a great sensation. She was said to have strangled at different times six young children who were related to her in various degrees and were found dead after she had been alone with them. These victims were firstly in 1904 her own two children, aged respectively three months and seven years, and secondly, in 1905 four of her nephews and nieces. All of them had red marks round their necks. Subsequently, on April 5th, 1905, another nephew was found half-choked in her arms. On being taken to a hospital he recovered but the medical staff were decidedly of opinion that an attempt had been made to strangle him. The woman Weber was then arrested and formally charged with murdering the above-mentioned children, the circumstances of whose deaths had already caused her to be suspected. She was, however, acquitted by the Cour d'Assises in consequence of the medical evidence given by Professor Brouardel and by Dr. Thoinot, Dr. Descouts, Dr. Ogier, Dr. Socquet, Dr. Maret, Dr. Lande, and Dr. Brissaud, all of whom agreed as to the absence of positive signs of strangulation and declared that the children had died from meningitis. This acquittal was received by a portion of the public with vehement protests. When set at liberty the woman was deserted by her husband who was tired of her misconduct and intemperate habits. In June, 1906, she threw herself into the Seine but was rescued. On Jan. 30th, 1907, she once more attempted to drown herself but was again rescued. Her misfortunes at last excited public sympathy and a kind-hearted man of the peasant class, named Bavouzet, wrote to her offering her a place in his home. She accepted the invitation, arrived at the house on March 13th, 1907, and on April 17th following a child of Bavouzet died in her arms. She was again arrested and the medico-legal experts at Chateauroux were of opinion that the child had died from strangulation, but her counsel requested the court to hear rebutting evidence by Parisian experts. Dr. Thoinot and Dr. Socquet accordingly caused the body to be exhumed and came to the conclusion that death was due to enteric fever. The woman was again acquitted, a decision which was strongly condemned by public opinion, and she then returned to Paris, where, however, she was unable to support herself. On one occasion she went to the chief of the police and confessed herself guilty of all the crimes laid to her charge, but she afterwards withdrew her statements, saying that she only made the confession for the purpose of being arrested at a time when she had neither food nor lodging. Admitted into a charitable institution, she left it in order to resume her previous unsettled life. As in 1905, a man of the peasant class wrote offering her a home in Lorraine. She accepted the offer and arrived at the place on April 25th of the present year, but in four days she left his protection for that of a working mason, with whom she wandered from village to village. This man in his turn deserted her on May 5th at Commercy. The keeper of the humble lodging-house where the woman lived had a little son and she asked permission to have him to sleep with her. A few moments afterwards a noise was heard in the room and the child was found in the woman's arms dead from strangulation; she, however, declared that she recollected nothing of what had taken place and that she had done nothing to the child. She was immediately arrested and on trial was found guilty without hesitation, because the medical men of Commercy and two professors of the Faculty of Nancy were decidedly of opinion that the child had been strangled by means of a twisted

handkerchief drawn tight with many precautions. At the present moment public opinion is extremely hostile to the medical experts who gave evidence at the two former trials and by each time declaring the innocence of Jeanne Weber allowed her to escape from justice and to commit fresh crimes. Numerous interviews with medical men are being published in the newspapers, some defending and others condemning the experts, who for their part maintain that their opinions given in evidence were absolutely unassailable, because they did not find in the deceased any appearance which they could conscientiously regard as a positive indication that murder had been committed. As regards the crime which the woman has just perpetrated and about which there is no possibility of doubt, they think that she suffers from dementia aggravated by poverty, privation, intemperance, and mental excitement, and that she took the child's life under the influence of a genuine mental obsession. Their hypothesis is that the woman was tormented night and day by the thought that she was looked upon as a strangler of children and that she finally ventured upon doing what she had so often heard spoken about. This view of the case has, however, been received with distrust not only by the general public but also by a portion of the medical profession.

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At a meeting of the Academy of Medicine held on May 12th M. Richelot read an interesting and a suggestive paper on *Appendicite Larvée*. This condition, he said, is found among the class of cases known as muco-membranous entero-colitis; the patients complain of extremely varied general symptoms and no medical treatment is of any avail. On examination of the appendix it would be found to be diseased, although the patient presented none of the recognised clinical indications of appendicitis. In the cases observed by M. Richelot a constant pain in the epigastric region was a frequent symptom.

An Exhibition of Ambulance Dogs.

At the approaching international dog show the Eastern Canine Society has decided to organise, near Nancy, an exhibition of ambulance dogs, which will be held on June 23rd under the auspices of the Medical Service of the 20th Regiment. This will afford a very interesting demonstration of the services which well-trained dogs can render in searching for the wounded on a field of battle. One dog that will take part in the show, named Gaspard, which was trained by a hospital orderly of Nancy, has already a brilliant record for military ambulance work by seeking out and finding wounded men hidden amongst woods and in difficult country.

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The New Light-Bath Treatment.

I MENTIONED in my last letter the new light-bath treatment for cardiac and other chronic diseases carried out at the Finsen Medical Light Institute of Copenhagen. On the occasion of the inauguration of the new clinical building the technique of the treatment was described by Dr. A. Oigaard. Two large carbon arc lamps are used, each of 75 ampères and from 50 to 55 volts. They are placed 48 centimetres distant from one another and may be lowered or raised simultaneously according to the position, whether erect or recumbent, of the patient. The patient places himself as near as possible to the source of light, usually at a distance of from 50 to 60 centimetres, where the temperature is about 40° C. measured by the bright-bulb thermometer. During the treatment the patient wears only a sort of bathing drawers, slippers, a broad-brimmed straw hat with a linen veil and dark goggles. During the first 10 or 20 minutes the patient is in the standing position and turns from time to time in order to obtain a uniform action of the light over the whole surface of the body. The remaining 10 (or more) minutes of the séance are passed by the patient on a couch, the position of which is varied by the attendant. A shower bath finishes the treatment. The duration of a single treatment is, on an average, about half an hour. The number of séances going to make up a course is about nine; two séances are given in a week. The first objective effect of the light bath is erythema, the onset of which may be accompanied by slight but never disagreeable rigors and a slight rise of temperature. In three female patients the temperature, however, rose as high as 40·4° C. On the day following the treatment the temperature was always normal. As to the results, the following statements apply to the 159 out-patients treated at the Institute in 1907. Nearly all of them were treated exclusively by light baths, and most of them were able to follow their usual occupation during the treatment. In 34 of 60 cases the absolute heart dulness decreased, and in 10 out of 14 cases of œdema this condition disappeared totally. The blood pressure was determined in most of the patients by means of Hill and Barnard's sphygmomanometer. It turned out that in all cases where the pressure was abnormally high at the beginning of the treatment a decrease, and very often a considerable decrease, takes place. If the blood pressure was normal to begin with, the effect is only insignificant; in two cases there was a slight increase. The subjective effects of the treatment are a peculiar, agreeable feeling of weariness, and during the last half of the period a certain state of psychical excitation manifesting itself in a sensation of increased working power. Patients were nearly always able to sleep well during the treatment. Dr. H. Jacobaeus has published his experience of the light-bath treatment in angina pectoris. 52 patients were treated. In three cases the treatment had to be discontinued, while in two cases the result was negative. In 14 patients the effect was only slight or transitory. 33 patients were improved; in three of these a nearly complete recovery from the symptoms maintained itself for a long period. Dr. Jacobaeus thinks that the improvement obtained is due, at least chiefly, to the physiological effects of the light baths, and he expects that the light-bath treatment will also in future prove a valuable means of bringing about some degree of improvement in the majority of patients suffering from angina pectoris.

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At the last meeting of the Copenhagen Medical Society there was a discussion on appendicitis. Dr. L. Kraft said that in his opinion the various clinical forms of the disease might be assigned to one of four classes, which he described with much detail. Professor Tscherning said that it did not matter much whether the case appertained to one or another of the classes described, and he doubted very much whether he could recognise the classes from the description which had just been given. There were, however, two questions of importance—namely, was there any concomitant peritonitis and, particularly, was the peritonitis circumscribed or progressive? In the first case the surgeon might await the course of events, but in the second case he had to operate immediately. A very good sign of spreading peritonitis was the one described by the late Professor Lennander—namely, spreading painfulness on pressure. On the whole, Professor Tscherning's impression derived from watching nearly 1000 cases of appendicitis was that operation was the only real treatment for appendicitis; circumstances had, however, prevented him from operating in about a fourth of his cases. Professor Thorkild Rovsing alluded to a statement made by Dr. Kraft in his introductory address—namely, that Rovsing's symptom[1] of appendicitis was present only when the appendix was situated internally to the cæcum. He felt sure that the investigation had not been made in the correct manner as he had described it, for it had never yet disappointed him. He was astonished to hear that Professor Tscherning had not operated in all his cases, though he seemed to accept the axiom "once appendicitis, always appendicitis." He himself operated in practically all cases and was not able to see how the cases could be distinguished in which operation might be omitted.

Spirochæta Pallida.

At the last meeting of the Biological Society Dr. O. Thomsen read a paper on the distribution of spirochæta pallida in the tissues. He agreed with those investigators who regard the so-called silver spirochætæ as true spirochætæ pallidæ. He had found that the syphilitic pneumonia of newly born infants began as a peribronchitis, and that a thick layer of spirochætæ was to be found under the epithelium of the bronchioles. It was not until the later stages that the spirochætæ spread out in the tissues of the lung, and that

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the well-known macroscopic and microscopic lesions of syphilitic pneumonia developed.

Female Voting and Mental Disease.

Although the clamour of the British suffragettes to be allowed to vote in Parliamentary elections is of comparatively recent date, the women of Finland have not only for some time been in possession of the right to vote but may even be elected Members of Parliament. This would not, however, seem to be an undoubted boon. At least a Finnish medical man, Dr. Onni Granholm, asserts that there is a certain connexion between the votes-for-women movement and the frequency of mental diseases. He has chosen to study the question in a small municipality, as in the large towns the possible etiological factors of mental diseases are too many and too varied to allow of the drawing of trustworthy conclusions. In the municipality in question, Nurmes, the number of lunatics has been steadily and alarmingly increasing from the year 1900 up to now. In 1900 the population was 11,888 with 29 lunatics; in 1906 it was 12,137 with 67 lunatics. Dr. Granholm claims to be able to exclude any augmentation of the common causes of mental diseases, because the Socialist movement and the political disaster under which Finland has laboured have not extended their influence to the remote place in question. Moreover, morbid religious movements and heredity are also said to be unable to explain the increase of lunatics. But visitors to Nurmes speedily become aware of the very emancipated views of the female population, particularly the female teachers. In this gentleman's opinion domestic life in that place has become unfavourable to the normal mental development of the young of both sexes, the result being a marked increase in mental aberration.

May 20th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Use of White Phosphorus in the Manufacture of Matches.

THE Vienna Medical Society some time ago appointed a committee to investigate the conditions arising out of the use of white phosphorus in the manufacture of matches and the report of this committee has now been published. At present about 70 per cent. of the matches produced in Austria contain this dangerous white phosphorus, and the principal seat of the manufacture is now in Bohemia, having been transferred there from Vienna where the regulations and inspection are very strict. On this account phosphorus necrosis is very seldom seen in the clinics of the University of Vienna, whilst in the Bohemian hospitals such cases are fairly frequent. A careful examination of the hospital reports shows that every year at least 40 cases of phosphorus necrosis occur in Austria, and of these 20 per cent. prove fatal, either directly or indirectly. It could not be decided whether the main reason for the occurrence of the necrosis was the inadequacy of the regulations or the laxity of their application. The experience of all countries where white phosphorus is not strictly excluded from the manufacture shows that it is impossible even by the best of regulations to stamp out the disease. The use of this form of phosphorus is not only a source of risk to the persons engaged in the manufacture but is a danger to the general public as well, matches being used as an abortifacient in many rural districts. Moreover, in Vienna alone there have been during the last ten years 741 cases of females and 396 cases of males who had attempted suicide by the phosphorus contained in matches; 342 of these proved fatal. The ease with which the poison can be obtained in every family is mainly responsible for the large number of attempts, many excitable young people having been induced to end their troubles by so simple a means. The Vienna Medical Society therefore proposes that a petition should be addressed to the Government requesting it to prevent any further use of white phosphorus in match factories, to stop the sale of such matches, and to accept the principles of the convention held at Berne in 1906, which nearly all European countries have joined.

Poisoning by "Montanin."

Two cases of poisoning by a liquid hitherto not regarded as dangerous to life have occurred quite recently in Vienna and they deserve mention on account of their toxicological interest. "Montanin" is a by-product of ceramic processes; it forms a colourless, odourless liquid, containing about 21 per cent. of hydrofluosilicic acid. It is used mostly in breweries as an antiseptic but the building trade employs it for drying damp walls and for preventing the formation of mould. In the cases cited above a man mistook it for beer in the dark and gulped down about a quarter of a pint of the liquid. His mother also had some of it but not more than a mouthful. The man a few seconds after drinking it complained of intense pain in his stomach and became very pale. Abundant salivation then appeared, and he soon vomited acid mucous masses which were at first whitish but afterwards brownish with some blood. Intense thirst caused him to swallow enormous quantities of water. Dyspnœa and convulsions set in and he died 15 minutes after taking the poison. The woman also complained of pain and thirst, but her condition improved after her stomach had been washed out in a hospital. She suffered only from acute toxic nephritis and acute gastro-enteritis and was discharged after a fortnight. Dr. Rosner, who reports these cases, concludes his paper with the remarks that "montanin" must be recognised as being a dangerous poison, that the inspectors of breweries should turn their attention to this supposed harmless liquid, and that in forensic cases such as trials for murder in which a mineral acid has been used the presence of "montanin" may give a clue to the murderer. At the necropsy of the deceased man it was found that all the symptoms produced by ordinary corrosive acids were present; the mucous membranes of the œsophagus and the stomach and part of the liver were white and eroded; the blood was liquid; there were no marked changes in the spleen or kidneys.

A Novel Method of Removing a Foreign Body from the Bladder.

At a recent meeting of the Medical Society Dr. Lenk of Professor Hochenegg's clinic, showed a man 56 years old, who had applied for advice with symptoms of severe hæmaturia and cystitis. When he was examined by means of a large cystoscope a wax taper, twisted on itself and covered by incrustations, was plainly seen floating in the upper part of the liquid contained in his bladder, where it had been introduced some 16 weeks ago and had set up severe ulcerative cystitis. The condition of the patient was very unpromising; an operation was certain to be dangerous owing to the state of the bladder; and extraction without injury to the urethra was impossible on account of the incrustations. Professor Hochenegg accordingly suggested that benzene (one of the light liquid petroleums) should be injected into the bladder so as to dissolve the taper. In order to make the method as little painful as possible, the inflamed mucous membrane being highly irritable, 120 cubic centimetres of sterile water were first injected into the bladder, distending it and causing the taper to float; 50 cubic centimetres of benzene were then injected, and this being lighter than water rose to the top and acted readily on the taper without causing much pain, as the diseased part of the bladder was not in contact with the irritant liquid. The benzene was withdrawn after acting for 20 seconds. Five sittings, each of 20 seconds' duration, were sufficient to dissolve the stearin of the taper and the incrustations were now reduced to mere sand which could be easily evacuated by the stream of urine. The wick of the taper was easily removed by a lithotrite. The method was very easy and safe, the result was perfect, and since several instances in which tapers have been introduced into the bladder are on record, it may soon be possible to repeat the process in another patient.

Extraperitoneal Suprasymphyseal Delivery of a Living Child.

Professor Latzko, at a recent meeting of the Gesellschaft der Aerzte, showed a newly born infant with an ulcer resembling a bed-sore of the size of a shilling, localised on the left parietal bone. It was caused by pressure on the promontory of a narrow pelvis. Labour had commenced 24 hours before the patient came under observation, but as the conjugate diameter of the pelvis measured only three inches the child's head did not advance in spite of the powerful contractions of the uterus. Finding that the patient's temperature began to rise and believing that there was a possibility of saving the child's life, Professor Latzko resolved to operate by a modification of the method of Frank who divided both layers of the peritoneal covering of the uterus and stitched them together, so that the peritoneal cavity was completely closed before the uterus was incised.

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THE Vienna Medical Society some time ago appointed a committee to investigate the conditions arising out of the use of white phosphorus in the manufacture of matches and the report of this committee has now been published. At present about 70 per cent. of the matches produced in Austria contain this dangerous white phosphorus, and the principal seat of the manufacture is now in Bohemia, having been transferred there from Vienna where the regulations and inspection are very strict. On this account phosphorus necrosis is very seldom seen in the clinics of the University of Vienna, whilst in the Bohemian hospitals such cases are fairly frequent. A careful examination of the hospital reports shows that every year at least 40 cases of phosphorus necrosis occur in Austria, and of these 20 per cent. prove fatal, either directly or indirectly. It could not be decided whether the main reason for the occurrence of the necrosis was the inadequacy of the regulations or the laxity of their application. The experience of all countries where white phosphorus is not strictly excluded from the manufacture shows that it is impossible even by the best of regulations to stamp out the disease. The use of this form of phosphorus is not only a source of risk to the persons engaged in the manufacture but is a danger to the general public as well, matches being used as an abortifacient in many rural districts. Moreover, in Vienna alone there have been during the last ten years 741 cases of females and 396 cases of males who had attempted suicide by the phosphorus contained in matches; 342 of these proved fatal. The ease with which the poison can be obtained in every family is mainly responsible for the large number of attempts, many excitable young people having been induced to end their troubles by so simple a means. The Vienna Medical Society therefore proposes that a petition should be addressed to the Government requesting it to prevent any further use of white phosphorus in match factories, to stop the sale of such matches, and to accept the principles of the convention held at Berne in 1906, which nearly all European countries have joined.

Poisoning by "Montanin."

Two cases of poisoning by a liquid hitherto not regarded as dangerous to life have occurred quite recently in Vienna and they deserve mention on account of their toxicological interest. "Montanin" is a by-product of ceramic processes; it forms a colourless, odourless liquid, containing about 21 per cent. of hydrofluosilicic acid. It is used mostly in breweries as an antiseptic but the building trade employs it for drying damp walls and for preventing the formation of mould. In the cases cited above a man mistook it for beer in the dark and gulped down about a quarter of a pint of the liquid. His mother also had some of it but not more than a mouthful. The man a few seconds after drinking it complained of intense pain in his stomach and became very pale. Abundant salivation then appeared, and he soon vomited acid mucous masses which were at first whitish but afterwards brownish with some blood. Intense thirst caused him to swallow enormous quantities of water. Dyspnœa and convulsions set in and he died 15 minutes after taking the poison. The woman also complained of pain and thirst, but her condition improved after her stomach had been washed out in a hospital. She suffered only from acute toxic nephritis and acute gastro-enteritis and was discharged after a fortnight. Dr. Rosner, who reports these cases, concludes his paper with the remarks that "montanin" must be recognised as being a dangerous poison, that the inspectors of breweries should turn their attention to this supposed harmless liquid, and that in forensic cases such as trials for murder in which a mineral acid has been used the presence of "montanin" may give a clue to the murderer. At the necropsy of the deceased man it was found that all the symptoms produced by ordinary corrosive acids were present; the mucous membranes of the œsophagus and the stomach and part of the liver were white and eroded; the blood was liquid; there were no marked changes in the spleen or kidneys.

A Novel Method of Removing a Foreign Body from the Bladder.

At a recent meeting of the Medical Society Dr. Lenk of Professor Hochenegg's clinic, showed a man 56 years old, who had applied for advice with symptoms of severe hæmaturia and cystitis. When he was examined by means of a large cystoscope a wax taper, twisted on itself and covered by incrustations, was plainly seen floating in the upper part of the liquid contained in his bladder, where it had been introduced some 16 weeks ago and had set up severe ulcerative cystitis. The condition of the patient was very unpromising; an operation was certain to be dangerous owing to the state of the bladder; and extraction without injury to the urethra was impossible on account of the incrustations. Professor Hochenegg accordingly suggested that benzene (one of the light liquid petroleums) should be injected into the bladder so as to dissolve the taper. In order to make the method as little painful as possible, the inflamed mucous membrane being highly irritable, 120 cubic centimetres of sterile water were first injected into the bladder, distending it and causing the taper to float; 50 cubic centimetres of benzene were then injected, and this being lighter than water rose to the top and acted readily on the taper without causing much pain, as the diseased part of the bladder was not in contact with the irritant liquid. The benzene was withdrawn after acting for 20 seconds. Five sittings, each of 20 seconds' duration, were sufficient to dissolve the stearin of the taper and the incrustations were now reduced to mere sand which could be easily evacuated by the stream of urine. The wick of the taper was easily removed by a lithotrite. The method was very easy and safe, the result was perfect, and since several instances in which tapers have been introduced into the bladder are on record, it may soon be possible to repeat the process in another patient.

Extraperitoneal Suprasymphyseal Delivery of a Living Child.

Professor Latzko, at a recent meeting of the Gesellschaft der Aerzte, showed a newly born infant with an ulcer resembling a bed-sore of the size of a shilling, localised on the left parietal bone. It was caused by pressure on the promontory of a narrow pelvis. Labour had commenced 24 hours before the patient came under observation, but as the conjugate diameter of the pelvis measured only three inches the child's head did not advance in spite of the powerful contractions of the uterus. Finding that the patient's temperature began to rise and believing that there was a possibility of saving the child's life, Professor Latzko resolved to operate by a modification of the method of Frank who divided both layers of the peritoneal covering of the uterus and stitched them together, so that the peritoneal cavity was completely closed before the uterus was incised.

Professor Latzko, however, modified this plan so as to operate quite extraperitoneally. After filling the bladder with 150 cubic centimetres of sterile water he made a longitudinal incision through the linea alba to the peritoneum. The recti muscles were then drawn apart, the bladder was gently separated from the cervix and pulled to the left, the peritoneum covering the lower part of the corpus was pushed upwards, and then the cervix and the lower uterine segment were divided longitudinally. In the case of the above-mentioned woman, a child weighing seven and a quarter pounds was delivered in this way. After removal of the placenta the wound in the uterus was stitched together, the bladder resumed its normal position, and the anatomical relations of the various parts were the same as before the operation. The disadvantages of the method consisted in the suture of the lower part of the uterus, and although experience has shown that this did not interfere with later pregnancies it might nevertheless form a *locus minoris resistentiæ*. The method would have to be tried on a large scale and if finally approved of it would no doubt give more possibilities to the surgeon than either Cæsarean section or symphysiotomy. Naturally, in cases of infection it would be advisable not to open the uterus but rather to perforate the child's head in order to save the mother's life; if, however, asepsis was quite certain, or at least very likely, the new method would be a great advantage in cases where delivery by the natural method was impossible. The statistics of Frank, Veith, and Sellheim showed that the incision in the anterior wall of the cervix healed very promptly and the short incision in the uterine segment (from a quarter to half an inch in length) did not give rise to any trouble, even in the first cases published a year ago. In the discussion this danger was, however, especially pointed out by many eminent gynæcologists, and the general opinion was that only a series of carefully observed after-histories could settle the question.

May 25th.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

TUESDAY, MAY 26TH.

THE eighty-seventh session of the General Council of Medical Education and Registration opened to-day at the offices of the Council at 299, Oxford-street, London, W. Dr. DONALD MACALISTER, the President, was in the chair.

The President's Address.

The PRESIDENT then delivered his address. He said: By the sudden death of our colleague and friend, Sir Thomas McCall Anderson, Regius professor of medicine in the University of Glasgow, a vacancy has been caused in the membership of the Council. Sir Thomas had been of our number since the year 1903. He succeeded, both in the University and in this chamber, to the place previously occupied by Sir William Tennant Gairdner. That wise and good physician has also passed away in the fulness of years and of public esteem. The medical faculty in Scotland has lost much in losing two such leaders. Each in his own way, by virtue of his character no less than of his attainments, enriched our professional life and enhanced our professional influence in the nation. Death has this year removed two other Scottish representatives of past times. Sir Patrick Heron Watson and Dr. James Bell Pettigrew sat for a quarter of a century at our table; to many of us they were known as familiar friends, and to all of us they were known as veterans in the service of medicine. The University of Glasgow has done me the honour of appointing me, as from May 27th, to be its representative on the Council. I propose, accordingly, to resign to-morrow the seat to which, some 19 years ago, I was elected by my fellow-graduates of the University of Cambridge. In doing so I gratefully acknowledge the forbearance of the Senate in allowing me to sit as its representative after I had ceased to be engaged in the active service of the University. Though my resignation of one seat and my appointment to another are simultaneous, our legal advisers are of opinion that the resignation of my Cambridge seat *ipso facto* vacates the President's chair. To-morrow, therefore, I shall have to restore to your hands the trust you were so good as to confide to me three and a half years ago. To fulfil to your satisfaction that most honourable trust has been my dearest ambition; if I have come short it has not been for the want of loyal support or of generous consideration on the part of the members and officers of the Council. To all who have thus helped to make good my deficiencies and to forward the business of the Council as it has been forwarded I offer my hearty thanks. I shall vacate the chair with the assurance that none of my predecessors during the half century of our history has been more cordially assisted by his colleagues. Certainly none can have observed a greater degree of willingness on the part of members to devote themselves to the Council's work or seen that work carried out with a keener desire for efficiency or a more careful economy of time and means. The unforeseen interruption of my tenure gives me a welcome opportunity of expressing in public my sense of the zealous and yet harmonious spirit with which the Council is animated. Its zeal and harmony have made the tasks that have fallen to me both easy and pleasant, notwithstanding the misgivings I felt as to my own power to perform them well.

It is not my intention to trouble you with a retrospect of the Council's various activities during the last few years. The general facts are familiar to you all, and comments from me might be out of place. But in one direction we may well look back with satisfaction: I mean the direction of finance. For the year 1903 the excess of the Council's expenditure over its income was £2165. For the seven years' period then completed the average annual deficit was £1645. In 1904 the deficit fell to £218, though the income also declined. In 1905, for the first time in ten years, there was a surplus, amounting to £907. In 1906 there was again a surplus which, but for the extraordinary expenditure due to the general election of Direct Representatives, would have amounted to £910. In 1907, the year on whose accounts the Finance Committee will report at this session, the surplus is £1095, after paying £415 towards the expense of enlarging the Council chamber. Our income is practically stationary; the improvement in our position is due to economy, perhaps I might say parsimony, on the side of expenditure. But we have still some £800 or £900 of debt to pay off for the structural additions to this room, and our treasurers cannot yet afford to relax their vigilant supervision of our outgoings. During the recess they have sanctioned an improvement which, in view of the faulty acoustics of the chamber, had become practically a necessity. The representatives of the press, to whose skill and discretion we are so often indebted, complained with reason that the difficulty of following our debates had been increased by the enlargement and rearrangement of the building. By the erection of a light gallery, specially reserved for press purposes, and placed within the chamber itself, we hope that the work of the reporters will be lightened, while the accommodation for the public will be increased. The cost of the improvement will not be serious. I may add that a number of suggestions for varying the present position of the chair and of the members' seats, with a view to improving the general comfort in the matter of hearing, have been considered; but none has yet been found to be free from serious practical disadvantages.

In my last address I indicated that the existing difficulties in the way of medical reciprocity with the Province of Quebec had been removed by the spontaneous action of the local authorities. The modification of the provincial regulations which they proposed has proved to be satisfactory to His Majesty in Council. Accordingly an Order was issued by the Privy Council on Feb. 29th recognising the Province as a separate British possession and applying to it the provisions of Part II. of the Medical Act, 1886. In pursuance of the Order in Council two Universities—namely, the McGill University of Montreal and the Laval University of Quebec—have submitted to the Executive Committee particulars of their medical curricula and examinations with a view to the recognition of their degrees for the purpose of registration. The committee has satisfied itself that the degree of Doctor of Medicine granted by these important bodies furnishes a sufficient guarantee of the proficiency of their graduates, and in accordance with the Council's Standing Order has agreed that they should be recognised under the conditions prescribed in the Medical Act. The Province possesses other medical authorities who will doubtless soon make application for the recognition of their diplomas. The Executive Committee will deal with all such applications as speedily as possible after their receipt. I learn that the War Office authorities are prepared to offer

to Quebec graduates registered in this country the same facilities in respect of commissions in the Army Medical Service as are enjoyed by registered graduates from Nova Scotia. It is to be hoped that the recognition accorded to these two provinces may have the effect of inducing the other provinces of the Dominion to reconsider the question of reciprocity from a national rather than a local point of view. To myself personally it is a matter of encouragement that the journey I made to Quebec in the summer of 1906 in the interest of this question has borne satisfactory fruit.

The committee appointed in November to consider the question of restraining medical practice by unqualified persons was instructed to ascertain the present state of the law respecting such practice in the various portions of the British Empire and in foreign countries. I sought the help of the Lord President of the Privy Council to enable me to procure authoritative information on the subject, and owing to his lordship's friendly interest extensive inquiries have been made through the India Office, the Colonial Office, and the Foreign Office, which have resulted in the accumulation of a large amount of valuable information. The data obtained and the lessons to be derived therefrom will doubtless be presented to you in due time by Dr. Langley Browne's committee. The difficulty of obtaining remedial legislation, even for admitted evils affecting the practice of medicine, is illustrated by the slow progress of the Medical Companies Bill in the House of Commons. Sir John Batty Tuke has repeatedly put down the Bill for second reading as a measure unopposed in the House of Lords, but it has hitherto been as persistently "blocked." Unless special facilities are afforded by the Government little progress with the Bill can be looked for in this session. The existing state of public business almost precludes the expectation that such facilities will be granted. A slight alteration in the rules framed under the Midwives Act has been submitted by the Privy Council for our consideration. It will be brought before the English branch which in such cases is empowered to act for the General Medical Council. The statute regulating the proceedings of the Medical Faculty of the University of Wales, established by the University under a recent supplemental Charter, provides for the constitution of a standing Committee of Advice, to be called the Medical Board. One member of the board is to be appointed by the President for the time being of the General Medical Council. I have been formally requested to make an appointment, but in view of the circumstances affecting my tenure of office, to which I have already referred, it has seemed to me inexpedient that I should do so at present. We may, however, expect that before long Wales, and perhaps Belfast and Bristol also, will contribute new units to the already large group of British licensing bodies. The chairman and members of the Education Committee have been busily engaged in collecting and analysing for your information the statistics, courteously furnished by these licensing bodies, regarding the curriculum actually pursued by students who attained a qualification in 1906. The diversities of regulation and practice met with in the inquiry render the analysis far from easy; but the statistics have the advantage of illustrating, as it were by actual experiment, the direct and indirect effects of the several methods of control which are from time to time pressed upon the Council for universal adoption. The report of Dr. Mackay's Committee will enable the Council, in revising its recommendations, to proceed, if proceed it must, on the basis of a wide induction from observed facts. The Pharmacopœia Committee will also be occupied for some time to come with the analysis of a large body of suggestions for the improvement of the Pharmacopœia, which, on my invitation, have been made by committees appointed by the various medical authorities of the kingdom. Here again an interesting and instructive diversity characterises the proposals offered for the committee's consideration; but there is a body of concordant opinion in favour of certain changes, sufficient to guide us in the task of revision, to which we are now addressing ourselves. The Pharmaceutical Societies of Great Britain and of Ireland, through the Committee of Reference in Pharmacy nominated by them, continue to assist us materially in regard to the aspects of the subject with which they are especially conversant, by the preparation of valuable reports which will be published in due course.

It has been found necessary, with the advice and help of our legal advisers, to take steps to safeguard the Council's property in the "copyright" of the present and of future Pharmacopœias. The revenue derived from the sale of the official volume is not large, in view of the heavy cost of preparing and publishing the successive issues. This revenue contributes nothing to the general income of the Council, but is applied solely to the special work, in the public interest, with which the Pharmacopœia Committee is charged. It cannot be diminished without risk of impairing its work. There is reason to believe that the steps taken to defend the Council's statutory rights in the Pharmacopœia have proved effective; and that the nature, extent, and object of these rights have become better understood and respected by authors and publishers. The Executive Committee has had its attention called to certain verbal discrepancies and ambiguities in the Standing Orders governing the Council's procedure in penal cases. These Orders have been framed at various times and by different hands, with the result that though their tenor is plain, the language employed is not always consistent and it is sometimes deficient in clearness. The Committee has thought it well to request our solicitor and counsel to revise the text throughout, with the object of removing these defects and bringing out more definitely the meaning intended by the Council. The Orders as revised will be submitted for your approval. It will be understood that it is the form only, not the substance, which has been subjected to verbal emendation. In particular, pains have been taken to express the questions put in succession from the chair in a manner that will obviate misunderstanding of the exact issue to be decided by the Council at each stage of an inquiry. A considerable part of this session must be devoted to the hearing and determining of charges brought against registered practitioners. Some of these charges are serious, and all are regrettable. One of the cases, partially heard and then adjourned last November, comes up for further hearing now. During the interval an application was made to another court, the object of which was to inhibit the Council from continuing the inquiry. Our legal representatives appeared to show cause against such an inhibition, but the rule *nisi* calling upon them to do so was discharged before they had an opportunity of addressing the court. The Council will accordingly ignore this episode and continue its inquiry without reference to anything but the evidence produced before it.

In conclusion I would remind the Council that its first meeting was held on Nov. 23rd, 1858, pursuant to a summons by the Secretary of State, at the Royal College of Physicians of London, and under the presidency of Sir Benjamin Brodie. Our next session, in the ordinary course, will begin on Nov. 24th, 1908, when the Council will just have completed the first 50 years of its existence. I suggest that we should celebrate our jubilee by a friendly reunion to which all who survive of the past members of the Council should be invited. If the suggestion meets with your approval it will be convenient to appoint a small committee to coöperate with your officers in making the necessary arrangements.

Dr. J. LITTLE, in moving that Dr. MacAlister's speech should be placed on the minutes, said that he could not agree with the legal opinion as to the President's status which had been given. No member who had known Dr. MacAlister and had seen how he performed his duties would raise any question as to his remaining in office. His attention to his duties, the vigour with which he had carried on the business of the Council, and the courtesy that he had extended to all the members had endeared him to them.

The motion was agreed to.

Annual Tables for 1907.

Seven tables showing the result of various professional medical examinations, dental examinations, and competitions for commissions in the medical staff of the Royal Navy and in the Indian Medical Service were received.

On a motion of Dr. D. C. MCVAIL it was agreed to convey the thanks of the Council to the Director-General of the Medical Department of the Royal Navy and the Under Secretary of State for India respectively for the returns which they had again furnished to the Council.

The Conduct of Members of the Medical Profession.

Dr. R. SAUNDBY moved:—

That in future such regulations of the General Medical Council as have been passed from time to time relating to the conduct of members of the medical profession shall be included in the matter published in the Medical Register.

He pointed out that there was no official publication of the Council which enabled them to find in clear form those

notices relating to the conduct of members of the medical profession which had been issued from time to time. His suggestion was that they should be bound up so that every practitioner who had a Register could find out what exactly the Council said upon a particular matter.

After discussion the motion was agreed to.

The Conduct of Members of the Dental Profession.

On the motion of Dr. SAUNDBY another motion was carried that the regulations of the General Medical Council relating to conduct of the dental profession should be included in the matter published in the Dental Register.

The Apothecaries' Society of London.

On the motion of Sir HUGH R. BEEVOR it was agreed to appoint Mr. Peyton Todd Bowman Beale, F.R.C.S. Eng., L.S.A., Assistant Examiner in Surgery to the Apothecaries' Society of London, vice Mr. C. Stonham who retires by rotation.

A Voluntary Removal from the Register.

The PRESIDENT announced the removal from the Register at his own request of the name of Mr. John Shaw, M.D. Lond.

The Apothecaries' Hall of Ireland.

The chief debate during the rest of the sitting concerned the reports on the examinations of this corporation.

The Council adjourned.

WEDNESDAY, MAY 27TH.

The Council resumed its sittings when official announcement was made of the appointment of Dr. Donald MacAlister as representative of the University of Glasgow. Thereupon Dr. MacAlister was unanimously and with acclamation re-elected President of the Council.

The rest of the sitting was occupied by the consideration of penal cases.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—H. R. Coombes (Section I.), Cambridge, and Westminster Hospital; L. G. H. Furber (Sections I. & II.), St. Bartholomew's Hospital; E. Lakovski (Sections I. & II.), Kieff; G. R. McCowen (Sections I. & II.), McGill and St. Mary's Hospital; and G. Rollason (Sections I. & II.), Birmingham.

Medicine.—E. Lakovski (Sections I. & II.), Kieff; G. R. McCowen (Sections I. and II.), McGill and St. Mary's Hospital; J. M. Murray (Section II.), Royal Free Hospital and Durham; B. Robertshaw (Section I.), Manchester; and H. F. Wight (Section II.), Guy's Hospital.

Forensic Medicine.—E. Lakovski, Kieff; and G. R. McCowen, McGill and St. Mary's Hospital.

Midwifery.—E. Lakovski, Kieff; G. R. McCowen, McGill and St. Mary's Hospital; J. G. Morgan, London Hospital; and S. K. Poole, Guy's Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery:—L. G. H. Furber, E. Lakovski, G. R. McCowen, and G. Rollason.

ROYAL COLLEGE OF SURGEONS IN IRELAND: FELLOWSHIP EXAMINATION.—The following candidates having passed the necessary examination have been admitted Fellows of the College:—

A. L. Fuller, M.R.C.S. Eng.; S. R. Godkin, L.R.C.S.I., Captain I.M.S.; A. Greene, B.Ch. Dub. Univ.; and M. R. J. Hayes, L.R.C.S.I.

The following have passed the primary part of the examination:—

K. Moinuddeen, L.A.H. Dub., L.R.C.S.I., Miss M. M. S. Coghlan, M. Drummond, G. J. Fraser, H. M. E. H. M'Adoo, J. M'Mullin, H. H. Montgomery, and W. A. Swan, Students Royal College of Physicians of Ireland and Royal College of Surgeons in Ireland; Miss P. M. Powell, Student Liverpool University; W. Prendiville, Student Royal University; and A. Stokes, Student Dublin University.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—On May 21st the President (Mr. Henry Morris), the Vice-Presidents (Mr. Rickman J. Godlee and Mr. W. Watson Cheyne), and the Council of the Royal College of Surgeons of England entertained at dinner in the College Viscount Selby, Lord Aldenham, Mr. Justice Phillimore (the Treasurer of the Middle Temple), Mr. J. S. Dugdale (the Treasurer of the Inner Temple), Sir R. Douglas Powell (President of the Royal College of Physicians of London), Sir William S. Church (President of the Royal Society of Medicine), Sir William J. Collins, M.P. (Vice-Chancellor of the University of London), Sir William Bull, M.P., Sir Philip Magnus, M.P., Mr. J. F. Remnant, M.P., Mr. G. C. Cooper, M.P., Sir William Matthews (President of the Institution of Civil Engineers), Sir James Reid, Sir Mackenzie Chalmers, the Archdeacon of London, Mr. R. A. Robinson (chairman of the London County Council); the Masters of the Drapers', Skinners', Clothworkers', Apothecaries', Curriers', and Pattenmakers' Companies; Sir Thomas Crosby, Mr. Adrian Pollock (the City Remembrancer), Inspector-General James Porter (Director-General of the Medical Department of the Royal Navy), Surgeon-General Sir Alfred Keogh (Director-General of the Army Medical Service), Inspector-General Sir Herbert Ellis, R.N., Sir Somerset French, Sir Thomas Smith, Mr. Thomas Bryant, Sir John Tweedy, Sir William H. Bennett, Sir Ernest Waterlow, R.A., Professor W. J. Sollas (President of the Geological Society), Professor Percy Frankland (President of the Institute of Chemistry), and the Rev. T. N. H. Smith-Pearse. The members of Council present were Mr. A. W. Mayo Robson, Mr. Henry T. Butlin, Mr. A. Pearce Gould, Mr. R. Clement Lucas, Mr. John H. Morgan, Mr. H. H. Clutton, Mr. C. W. Mansell Moullin, Mr. Clinton T. Dent, Mr. G. H. Makins, Mr. Frederic S. Eve, Mr. Anthony A. Bowlby, Mr. W. Harrison Cripps, Mr. W. Bruce Clarke, together with Mr. Frederic G. Hallett (secretary to the Conjoint Examining Board), Mr. Victor G. Plarr (librarian), Dr. Arthur Keith (conservator), and Mr. S. Forrest Cowell (secretary). After the dinner the company adjourned to the council room where a selection of specimens from the museum were on view.

THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—The Pharmaceutical Society held its annual dinner at the Whitehall Rooms, Hotel Métropole, London, on May 19th, the company numbering nearly 200 under the chairmanship of Mr. J. Rymer Young, F.C.S., J.P., the President of the society. Amongst those present were Sir R. Douglas Powell, President of the Royal College of Physicians of London; the Right Hon. T. Lough, M.P.; Dr. G. Wilks, Master of the Society of Apothecaries; Sir Thomas Stevenson; Sir Boverton Redwood; Sir John McFadyean, President of the Royal College of Veterinary Surgeons; Mr. R. A. Robinson, chairman of the London County Council and ex-President of the Pharmaceutical Society; Mr. Henniker Heaton, M.P.; Mr. T. H. W. Idris, M.P.; Mr. R. Winfrey, M.P.; Mr. A. H. Crosfield, M.P.; Dr. A. Newsholme, Chief Medical Officer, Local Government Board; Lieutenant-Colonel A. C. Preston, V.D.; Professor A. Crossley, F.R.S.; Mr. J. F. Harrington; Mr. J. Humphrey; Mr. J. C. Umney, F.C.S.; Mr. W. F. Gulliver; Mr. A. E. Ekins, F.I.C.; Mr. J. Bourdas; Mr. G. Lunan; Mr. W. Hills (treasurer); and Mr. R. Bremridge (secretary). A quartet of vocalists rendered thanks for an admirable dinner in a charmingly sung grace and contributed a musical programme in the intervals of the speeches. The chairman proposed "The King" and "The Houses of Parliament," referring in his latter speech to the gratitude which the society owed to Mr. Lough and Mr. Idris for their determined conduct of its battles in Parliament. He alluded in guarded and not too hopeful terms to the probable outcome of the present committee which is considering the question of companies trading as chemists and druggists. Mr. Lough replied in a very genial speech in which he declared his intention to continue to support the society in its just claims and assured his hearers that the House of Commons was an assembly to which any reasonable appeal could be made with success. Mr. Idris also replied, urging individual members of the society to lay their case before their own Members of Parliament. The chairman proposed "The Medical Profession" in eulogistic terms, especially commending the good and unselfish work done by the body of general practitioners throughout the country. In reply, Sir Richard Douglas Powell said that medical effort would be paralysed were it not that the medical profession had at its call a learned body of men who were able to compound its prescriptions correctly and to vouch for the purity of the drugs that they used. Sir Boverton Redwood, F.I.C., in proposing "The Pharmaceutical Society of Great Britain," briefly reviewed its history and stated reasons for its existence, chief amongst which was the elevation of the profession of pharmacy to its proper status by means of a uniform system of education amongst its members. It was not in any ordinary acceptation of the term a union for the protection of the trade interests of

chemists; in spite of much misrepresentation the question of prices and other trade matters was not within its control. The society protected the public, and all registered chemists and druggists, whether members or not, shared in its benefits. The President, whose name was coupled with the toast, in his reply asserted that the justice of the society's attitude with regard to the companies was entirely unassailable, whatever the present committee might report on the matter. The remaining toasts were "The Chairman of the London County Council," proposed by Mr. Winfrey, M.P., and "The Guests," responded to by Mr. G. Lunan and Sir John McFadyean.

DONATIONS AND BEQUESTS.—Colonel W. W. Clapham, of Crumpsall House, Manchester, has given to the Manchester Hospital Saturday Fund £5000 as a personal contribution to the funds of the Manchester and Salford Hospitals. In a letter to the secretary of the Fund the donor explains that his gift is "in simple thankfulness for many blessings during 50 years of business life."

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. L. Ragosin, president of the medical council of the Ministry of the Interior, St. Petersburg, aged 61 years.—The Rostock professor of physiology, Dr. Oskar Langendorff, whose death has been already announced, is stated by the German medical papers to have died from angina pectoris, and it is remarkable that nearly all the scientific work which he published both in Königsberg, where he was previously extraordinary professor, and in Rostock was connected with cardiac physiology.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held at Caxton House, Westminster, on May 21st, Dr. F. H. Champneys being in the chair. The chairman made a sympathetic reference to the loss sustained by the Board by the death of Dr. C. J. Cullingworth, and Sir William J. Sinclair, Mr. E. Parker Young, and Dr. S. B. Atkinson also delivered eloquent tributes to his memory. It was agreed that a letter should be written by the chairman to Mrs. Cullingworth expressing the sympathy of the Board. On the request of Princess Christian her maternity home at Windsor was officially recognised as a training school for midwives. A letter was considered from the general secretary of the British Medical Association as to the question of bringing to the notice of midwives the importance of the earlier recognition of uterine cancer. The Board decided that the general secretary of the British Medical Association should be thanked for his letter and should be informed that the subject was already under consideration, a leaflet on the subject, prepared by the chairman of the Board, being about to be sent to midwives, teachers, and local supervising authorities. A letter was then considered from the clerk of the Worcestershire county council as to deaths of infants from pemphigus. The Board considered that the sanitary officers of the county should be encouraged to prosecute further inquiries into this interesting and important epidemic. A letter was read from the Under Secretary for Ireland as to providing facilities for the examination in Ireland of candidates for the Central Midwives Board certificate. It was decided that the Under Secretary should be referred to the following resolution passed by the Board on Jan. 31st, 1907:—

That the Board realises the difficulties of an extension of the Midwives Act, 1902, to Ireland, but would look with favour on a new Act for Ireland framed on the lines of the present Act.

A letter having been discussed from Dr. F. Rees of Wigan as to the training of pupil midwives, and from the clerk of the West Sussex county council suggesting certain amendments of the rules of the Board, Mr. H. G. Fordham moved and it was duly seconded:—

1. That it is desirable that the annual report of the proceedings of the Board should in future be prepared and presented to the Privy Council, with a view to its issue as a public document. 2. That in the meantime a summary of the proceedings of the Board for the five years ending March 31st last be prepared. 3. That the Privy Council be approached in order to obtain their assent to these arrangements.

The chairman pointed out that the annual report proposed would clear up many misunderstandings that were entertained about the Board which existed for the benefit of the public; the more the work of the Board was known the more it would be appreciated. The motion was then put and carried.

THE PRESIDENT OF THE FRENCH REPUBLIC AND THE FRENCH HOSPITAL.—M. Fallières held a reception at the French Hospital on Thursday morning, at which a small number of gentlemen connected with medicine and more immediately associated with the hospital were presented to him. The President of the Republic, who was accompanied by the members of the French Embassy, arrived punctually at 10.30 at the hospital and was received there by the chairman of the committee of the hospital, M. Ernest Rüffer (the munificent donor of the Pavillon Rüffer, which forms the right wing of the new French Convalescent Home at Brighton), many members of the committee and persons especially interested in the charity, and the medical staff of the hospital. M. Rüffer read to the President in the board-room of the hospital a warm address of welcome, in which was set out the story of the handsome support which the hospital had always received from the French Government and compatriot sympathisers and the lively interest that had been manifested by distinguished Frenchmen in the work, notably by M. Loubet, M. Fallières's predecessor as President of the French Republic, M. Paul Cambon, the French Ambassador, and M. Pichon, French Minister of Foreign Affairs. To this address M. Fallières replied in a few words of graceful appreciation of the work done by the French Hospital in behalf of his poor and sick countrymen working in London. M. Fallières then decorated M. Rüffer and other prominent workers in the interests of the hospital and made a short tour of inspection of the wards. The nature of the occasion no less than the magnificent weather caused a large crowd of French and English to assemble in Shaftesbury-avenue, and the arrival and departure of the President were greeted with hearty cheers.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—The annual provincial meeting of this society was held at Harrogate, under the presidency of Dr. W. J. Tyson (Folkestone), on May 16th and 17th. About 135 Fellows and guests attended this meeting, which proved most instructive, enjoyable, and successful. The fact is now firmly established that provincial meetings are very popular with the Fellows of the society and are much appreciated. On this occasion several of the Fellows were accompanied by their wives and daughters. The Fellows were received at 3.15 P.M. in the Spa Room of the Royal Baths by the Mayor of Harrogate (Dr. Neville Williams), the chairman of the baths and wells committee (Alderman Milner, J.P.), the town clerk, Dr. F. A. de T. Mouillot (the provincial secretary of the society), and by Mr. E. Solly, the president-elect. Eight new candidates were elected which makes the total roll over 400. The proceedings were opened by the Mayor after which the President occupied the chair.—Mr. C. Fox Strangways then read a paper on the Geology of Harrogate in Relation to its Mineral Waters, which was followed by a paper by Dr. Frederick Lever, President of the Harrogate Medical Society, on the Harrogate Waters and their Therapeutics. Tea was afterwards served in the Spa Room and the members were escorted over the Royal Baths, the Pump Rooms, and the Bogs Field. At 7 P.M. the Fellows and guests dined together at the Hotel Majestic. The toast of "The Town and Corporation and the Medical Profession of Harrogate" was proposed by the President and responded to by the Mayor and by Dr. W. Edgecombe. The toast of "The British Balneological and Climatological Society" was proposed by Alderman Milner, and was responded to by Dr. F. Bagshawe, chairman of council, and by Dr. Leonard Williams, editor of the *Journal of Balneology and Climatology*. Dr. Edgecombe, in the course of his remarks, said that the spas and watering-places of this country owed a debt of gratitude to the British Balneological and Climatological Society for the work which it had done and was doing in driving home to the minds of the medical men of this country the fact that here in the British Isles there were spas of equal, if not superior, value to any of those abroad and that many patients hitherto sent abroad could be equally well treated at a home resort. He also considered that those members of the profession who practised at health resorts were under a deep obligation to the society for its work in helping to raise spa treatment from the slough of empiricism to the domain of rational and scientific therapeutics. The Fellows were subsequently entertained at a concert at the Kursaal. On the following day (Sunday, May 17th) 84 Fellows and guests proceeded to Ripon, where some of them attended a service at Ripon Cathedral. The Dean of Ripon preached a sermon,

the subject being the "Pool of Bethesda." After the service Mr. G. R. Green, medical officer of health of Ripon, conducted the Fellows over the Ripon Spa Baths, where Mr. Bower, the Mayor of Ripon, and Alderman Wells, chairman of the spa committee, received the party. The Fellows were entertained to luncheon at the Spa Hotel by the proprietors. Afterwards a visit was made to Fountains Abbey by permission of the Marquis of Ripon. On returning to Ripon the Mayor entertained the party to tea at the Spa Hotel and later the Fellows returned by train to Harrogate. The arrangements throughout the whole meeting were most satisfactory, and the thanks of the Fellows are due to Dr. Mouillot, the organising secretary, and to Dr. F. W. Garrad, secretary of the Medical Society of Harrogate, who carried out so completely the intentions and wishes of the medical profession of Harrogate and Ripon in extending such a hearty welcome to the society.

LONGEVITY.—The *Yorkshire Post* of May 13th states that at a meeting of the Nottingham guardians held on the previous day one of the members drew attention to the fact that in their workhouse was the oldest woman alive, named Sarah Bramley. Existing records show that Miss Bramley was born in Nottingham in 1799 and is therefore aged 109 years. She entered the workhouse 45 years ago when 64 years of age and has cost the guardians over £900 for maintenance. She can see without the aid of spectacles. During the past three months she has been in indifferent health.

LITERARY INTELLIGENCE.—Messrs. Rebman, Limited, announce the following for publication in June: "A Manual of Practical X Ray Work," by Dr. David Arthur and Dr. John Muir; "The Theory of Ions," a Consideration of its Place in Biology and Therapeutics, by Dr. William Tibbles; "Electric Ions and Their Use in Medicine," by Professor Stephane Leduc, translated by Dr. R. W. Mackenna; and a little book on "Death and Its Verification," being a description of the various tests which should be adopted to prevent the risk of premature burial, by Mr. J. Brindley James. The same publishers have also just issued a volume entitled "Vitality, Fasting, and Nutrition," by Mr. Hereward Carrington; and a "Hematological Atlas with a description of the Technique of Blood Examination," by Dr. Karl Schleip.

UNIVERSITY OF CAMBRIDGE.—Mr. Shipley, M.A., of Christ's College, has been re-appointed the representative of the University on the council of the Marine Biological Association.—Professor G. D. Liveing has announced his intention of resigning the chair of chemistry on June 20th next. It is proposed by the Council of the Senate that the degree of Doctor of Science shall be conferred on Professor Liveing.—Alteration of dates of the Third M.B., Part II.: The Special Board of Medicine has reported to the Senate that in its opinion hardship is experienced by candidates, especially in the case of failure at the examinations, owing to the unequal intervals between the examinations under the present arrangement. The board recommends that the dates should be altered. The next examination will be held as usual in December, but the first examination next year will be held in June in the Easter Term on the last Tuesday but one before the end of term.

UNIVERSITY COLLEGE, LONDON: FOUNDATION WEEK.—Foundation Week at University College, London, will be celebrated during next week. On Wednesday, June 3rd, at 4.30 P.M., the new athletic ground at Perivale, acquired by the enterprise of the Students' Union Society, will be formally opened by Sir William J. Collins, M.P., Vice-Chancellor of the University of London. On the same afternoon the annual athletic sports will be held on the new ground. Lady Collins has kindly consented to give away the prizes. On Thursday, at 8.30 P.M., Mr. J. Lewis Paton, High Master of Manchester Grammar School and formerly head-master of University College School, will deliver the foundation oration, entitled "The University and the Working Classes," in the Botanical Theatre. Immediately before the oration the President, Mr. S. J. Willcox, will receive the guests of the Union Society. On Friday, at 8.30 P.M., the annual smoking concert for the benefit of University College Hospital will be held in King's Hall, Holborn Restaurant. It is hoped that former students of the College will, as far as possible, attend the foundation celebration functions. Applications for invitations and tickets accompanied by the date of period of study should be addressed to Mr. P. V. Thomas, honorary secretary of the Union Society, University College, Gower-street, London, W.C.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Juvenile Smoking.

THE juvenile smoking provisions in the Children Bill have so far proved the most contentious part of the measure. The Government has tried to propitiate the more moderate opposition to them, either by assenting to the modification of details in the Standing Committee or by the promise that certain alterations will be made when the report stage on the Bill is taken. The scale of penalties for the offence of selling tobacco to young persons has been amended to the extent that £10 instead of £20 is the maximum penalty for a third or subsequent conviction. Mr. HERBERT SAMUEL also intimated that when the Bill went back to the House of Commons he would bring up an amendment to delete from it the power given to a constable to search a boy found smoking in the streets. A further modification which he promised was to the effect that when a boy was detected smoking or purchasing cigarettes for the first time his parents should be notified. The penalties provided in the Bill would only come into force for subsequent offences.

Indecent Advertisements.

The joint committee of both Houses of Parliament appointed to consider the subject of lotteries and indecent advertisements heard some official evidence on the latter branch of the inquiry on May 21st. In dealing with the legal aspects of indecent advertisements and literature Mr. GUY STEPHENSON, Assistant Solicitor to the Treasury, suggested an amendment of the law on the lines of Section 5 of the Indecent Advertisement Act, 1889, which made it an offence to affix to buildings certain kinds of advertisements and defined what was an indecent advertisement. He suggested that these provisions, extended so as to cover advertisements or literature relating to the prevention of conception in cases where there had been something in the nature of a public distribution, might be incorporated in the Post Office Protection Act, which dealt with the sending of indecent matter through the post. Chief Inspector EDWARD DEW of Scotland Yard also appeared as a witness and handed in copies of publications which inserted advertisements of an objectionable nature, including some recommending remedies for female ailments. He spoke of the undesirable character of individuals who were associated with this class of enterprise. He also explained the existing legal powers of the police with regard to specific cases which he laid before the committee.

The Postmaster-General and his Medical Staff.

Several questions have recently been addressed to the Postmaster-General relating to the professional action of medical officers of the department in regard to members of the Post Office staff. Mr. BUXTON, it may be noted, has in each case entirely exonerated the medical officers from blame and expressed his regret at the injustice done to them by the terms of the questions.

HOUSE OF LORDS.

TUESDAY, MAY 26TH.

The Territorial Force: Fee for Examination of Recruits.

The Earl of ALBEMARLE, in calling the attention of the Under Secretary of State for War to various matters in connexion with the Territorial Army, alluded to the remuneration of medical officers for examining soldiers for physical fitness. He said that the medical profession complained very bitterly of being offered a shilling per head to inspect recruits. They would not have objected if they had been asked to do it for nothing, but they thought it was undignified to the profession to offer to pay a shilling per head.

Lord LUCAS (Under Secretary for War) replied that with regard to a shilling a head it must be borne in mind that it was an all-round payment. Medical officers in the past had examined recruits free with very great credit to themselves, and it was hoped that that great public spirit would continue to be shown. In cases of a unit where there was no medical officer belonging to it, it was thought that the payment of a shilling a head was adequate.

The Earl of ALBEMARLE (intervening) asked whether the noble lord knew what the examination was. To do it properly, no less than a quarter of an hour was necessary, although in his experience he had known cases where 150 men were examined in three minutes.

Lord LUCAS did not further allude to this subject.

HOUSE OF COMMONS.

WEDNESDAY, MAY 20TH.

A London Hospital Bequest.

Sir HENRY KIMBER asked the honourable Member for the Elland Division, as representing the Charity Commissioners, whether he would state under what power, whether statutory or otherwise, the Charity Commissioners sanctioned the handing over by the trustees of the Weir bequest the sum of £5000 out of the trust funds to the governors of the Bolingbroke Hospital before a scheme had been published and without giving the parishioners of the parish of Streatham

an opportunity of knowing or of protesting against such diversion of the trust money; whether the Charity Commissioners would lay upon the table a report of the public inquiry held last November at Balham into the administration of the trust and their decision thereon; whether he was aware that Mr. H. G. Hills, one of the Weir trustees who had been offered by the Bolingbroke Hospital on Oct. 16th last a life governorship of such hospital, on the following day wrote and declined the same; whether on the day before the Wandsworth borough council met to elect three representatives to the committee of management of the trust in place of the retiring members the trustees of the said fund co-opted two of such retiring representatives to be life trustees; whether such co-optation was in direct contravention of the terms of the said will; and if so, whether any steps had been, or would be, taken to remove such illegally appointed trustees, or to prevent them from acting in the administration of the trust.—Mr. TREVELYAN (by written answer) replied: The circumstances in which the Charity Commissioners sanctioned the payment of £5000 to the governors of the Bolingbroke Hospital were explained in the answer given by me to a question by the honourable Member on March 23rd last. The report made to the Commissioners on the result of the inquiry held last November is confidential. The decision of the Commissioners upon it will be shown in the scheme which is in preparation for publication. The Commissioners have been informed by Mr. H. G. Hills that he declined to accept nomination as a life governor of the Bolingbroke Hospital. The co-optation referred to by the honourable Member was of two persons to be members of the committee of management. It was invalid. The committee is not constituted and the only trustees of the charity are those appointed by the will.

Medical Attendance at the Post Office.

Mr. DEVLIN asked the Postmaster-General whether he was aware that the late Mr. D. J. Long, sorter at the South-Western District Post-office, London, was brought before the postmaster, Mr. Carew, on a discipline charge, on or about Feb. 21st last, and was excused on the ground of ill health; that before Mr. Long saw Dr. Brabant on Feb. 28th he informed his colleagues that he was in a state of collapse and, in anticipation of his obtaining sick leave, another officer had been told off to perform his duty, and that, notwithstanding this, Dr. Brabant told him that sick leave would do him no good; whether he would explain why Dr. Brabant did not examine Mr. Long on Feb. 28th, or why, having failed to examine him, he refused to accept a private doctor's certificate with regard to his condition, or why he sent him back to duty on Feb. 28th; whether Mr. Long was under any disability, owing to technical irregularities in the matter of visits of private doctors; and whether Dr. Brabant had received any papers with reference to Mr. Long which prejudiced him against that officer.—Mr. BUXTON (by written answer) replied: Mr. Long was brought before the postmaster of the South-Western District on a charge of insubordination; but that officer, being of opinion that ill-health was at the root of Mr. Long's conduct, sent him to the official medical officer on Feb. 21st. There was no evidence that Mr. Long informed his colleagues, before his second visit to the doctor on Feb. 28th, that he was in a state of collapse; and the provision of an officer to perform his duty in case sick leave should be recommended was only the usual measure of precaution taken in such cases. Sick leave was not granted by Dr. Brabant because there was nothing in Mr. Long's symptoms to indicate that it was essential; and on both occasions Mr. Long himself expressed anxiety to return to work. Dr. Brabant made such examination of Mr. Long as he thought desirable, having regard to his symptoms and appearance; and I see no reason to question the correctness of his treatment of the case. I am advised that no more extended examination would have revealed the approaching hæmoptysis, which could not have been foreseen. It is not the case that Dr. Brabant refused to accept a private certificate furnished by Mr. Long. Such a certificate was received on March 2nd and was returned by Mr. Long's superior officer for amendment in accordance with the rules. Dr. Brabant had nothing to do with its return. I am satisfied that Dr. Brabant was not in any way prejudiced against Mr. Long; and I must express my regret that a public insinuation against a member of the medical profession should be thus made.

THURSDAY, MAY 21ST.

The Medical Examination of Engine Drivers.

Mr. LONSDALE asked the President of the Board of Trade whether he would state what results had attended the representations made to railway companies on the subject of the medical inspection of engine drivers following upon Colonel Yorke's report upon the accident near Atherton.—Mr. CHURCHILL replied: The companies inform me that, generally speaking, engine-men are medically examined on entering the service, after illness or injury, and in any other case where the superior officer thinks it desirable. They add that they recognise that the subject is an important one and that it will continue to receive their attention. The question is one of difficulty and the Board of Trade is bound to consider the various and conflicting interests which are involved.

Deaths from Starvation.

Mr. SUMMERBELL asked the Secretary of State for the Home Department when the table of deaths in London in the year 1907 upon which a coroner's jury had returned a verdict of death from starvation or death accelerated by privation would be published; and whether the Government would take steps to compile and publish a similar table for the whole of England and Wales, showing in what Poor-law unions they took place.—Mr. GLADSTONE answered: The return for 1907 is now in the hands of the Local Government Board, which is collecting reports from the guardians in the cases returned by the coroners. I will consult my right honourable friend the President of the Board as to whether the reports can be expedited and also whether any useful purpose would be served by extending the return.

Legislation as to Milk.

Mr. GUINNESS asked the President of the Local Government Board whether he was in a position to give a date for the introduction of his promised Bill to prevent the supply of dirty milk.—Mr. BURNS answered: I cannot at present fix a date for the introduction of the Bill.

Public Health in Belfast.

Mr. DEVLIN asked the Chief Secretary to the Lord Lieutenant of Ireland whether any action had been taken either by the local authority or by the Local Government Board with regard to the report of the Belfast Health Commission; whether he was aware that the Commission attributed the recurrence of typhoid fever to shell-fish and insanitary conditions; whether any figures were available as to the quantity and source of supply of the shell-fish referred to; whether he had any official reports showing that not more than one-third of the drains and sewers in Belfast would stand the smoke test; and whether the report was to remain a dead-letter, or whether the Local Government Board would take action to see that the recommendations of the Commissioners were carried out.—Mr. BIRRELL replied (by written answer): I refer to my answer to the honourable Member's question of May 4th on this subject. The report is still under the consideration of the Belfast Corporation. Having regard to the many important recommendations made therein the corporation must be allowed a reasonable time for decision before the Local Government Board can take action. The various matters mentioned in the question are referred to in the report, but the Board has no more definite information on the subject than is therein contained.

The Administration of the Vaccination Act, 1907.

Sir MAURICE LEVY asked the Secretary of State for the Home Department whether, in view of the fact that the Vaccination Act, 1907, was passed for the purpose of rendering it unnecessary for conscientious objectors to vaccination to attend at a police court, he would communicate with all benches of magistrates in the country and point out that any resolution passed by such magistrates requiring conscientious objectors to vaccination to attend at a police court to get their statutory declarations witnessed by justices of the peace was opposed to the spirit in which the Act was passed, seeing that it was intended to prevent applicants having to lose a day's work and to go, often some miles, to a court for the certificate; and whether he was aware that, among other benches, the Bolton and Hanley benches had passed the resolution previously referred to.—Mr. GLADSTONE furnished the following written answer: I think the "long title" of the Act correctly indicates its object—that is, to substitute a statutory declaration for the certificate previously required and thereby to relieve an applicant from the necessity of convincing the justices that he has a conscientious objection. Several benches have passed a resolution to the effect that it is undesirable for justices to take these declarations except in open court, on the ground, as I understand it, that, generally speaking, it is proper that justices should not transact magisterial business in their own houses, except in cases of urgency, though I was not aware that the Bolton and Hanley magistrates had done so. Such scruples seem to me to be unnecessary. A resolution cannot override the power of any justice to act individually by taking a declaration at his own house if he sees fit, and I think that few justices will wish to put poor persons unnecessarily to the expense and trouble of attending a distant court by refusing to take their declarations. Moreover, a statutory declaration can be made before a commissioner for oaths or other officer authorised for that purpose, as well as before a justice. In these circumstances I do not think that a circular of the kind suggested by my honourable friend is called for.

MONDAY, MAY 25TH.

An Outbreak of Enteric Fever in Glasgow.

Mr. WATT asked the Secretary for Scotland what was the nature of the diagnosis which occupied the medical officers of health from Dec. 21st to 24th in connexion with the outbreak of typhoid fever at Kelvinside, Glasgow; whether he was aware that a typhoid case could be diagnosed in three hours by means of a bacteriological test; whether his attention had been called to the fact that one or more of these medical officers had since admitted that they waited during these days to see what would develop; and whether, in view of the results of this delay he would issue the new regulations with regard to the future.—Mr. SINCLAIR furnished the following reply: The period between the 21st and 24th was occupied by the assistant county medical officer in making inquiry into the circumstances of the case, in communicating with the private practitioner in attendance on the case who was absent at the time of his visit, and in obtaining from him material for the bacteriological investigations. I am aware that the actual process of making the bacteriological test only occupies a very short time. I have no information as to any admission having been made by any of the medical officers to the effect suggested. As regards the last sentence of the honourable Member's question, I am satisfied that medical officers are fully alive to the necessity for prompt action in such cases, and from the information before me I see no reason for issuing any special instructions.

The Status of Irish Prison Medical Officers.

Mr. T. M. HEALY asked the Chief Secretary to the Lord Lieutenant of Ireland whether prison doctors in Ireland were entitled to pensions under their original appointments; whether recently this right had been defeated by the appointments being made for three years only, with the result of depriving prison doctors of their independence by compelling them to rely on executive favour for their continuance in office; whether prison doctors were frequently called on to decide as between prisoners and gaolers on matters of health and treatment, so that the office was one peculiarly requiring permanency of tenure unless misconduct was proved; and whether it was at the instance of the Treasury that the Irish Government reduced the status of prison medical officers.—Mr. BIRRELL replied: Prior to 1877 the prison medical officers in Ireland were entitled to pension under the Acts then in force, but since the passing of the Prisons (Ireland) Act, 1877, only those medical officers who are members of the established civil service and give their whole time to the service are entitled to pension. The only officers so entitled are two in the Mountjoy Prison and one at Maryborough. Two of the existing medical officers of local prisons who were appointed before 1877 are also entitled to pension. The remainder of the prison doctors are local medical men who have private practice. The fact that they are appointed for temporary terms of three years does not affect the question of pension, which depends upon the established principle that those persons only who devote their whole time to the service of the State are entitled to pensions. The Government is not aware of any instance in which prison doctors have been called upon to decide as between prisoners and gaolers in matters of health and treatment, and there is, I am informed, no ground for the assumption that these

officers are not fully independent in the discharge of their duties. No case has yet occurred in which the temporary appointment has not been renewed at the expiration of the term of three years. The change in the status of medical officers as regards pension was not made by any Government department but, as I have indicated, by statute.

Certifying Surgeons.

Mr. JACKSON asked the Secretary of State for the Home Department whether he had instituted any inquiry among certifying surgeons as to the extent to which large employers of labour made use of the sixpenny certificate, which was originally intended for small employers only; and if so, whether he would state the result of such inquiry.—Mr. GLADSTONE furnished the following reply: Inquiry was made last year through the certifying surgeons, whose reports showed any considerable number of examinations of children and of young persons away from the factory, as to the size of the firms by whom the children or young persons were sent. The information obtained was very incomplete, but indicated that in a considerable proportion of cases the total number of persons employed by the firm was above the limit of ten suggested by the Association of Certifying Surgeons. The question will be borne in mind in connexion with any amending factory legislation that may be proposed.

The Indian Medical Service.

Dr. V. H. RUTHERFORD asked the Under Secretary of State for India whether it was necessary for Indian gentlemen to come over to England in order to enter the Indian Medical Service; and whether His Majesty's Government would advise the Government of India to hold examinations for the Indian Medical Service simultaneously in India.—Mr. BUCHANAN answered: To the first part of the question the reply is in the affirmative. It is not contemplated to hold examinations for the Indian Medical Service simultaneously in England and India.

Dr. RUTHERFORD further asked whether the chief appointments at the hospitals and medical schools and colleges in India were confined to members of the Indian Medical Service, and whether His Majesty's Government would advise the Government of India to open these important appointments to Indian subjects of the King without bias of race, creed, or colour.—Mr. BUCHANAN replied: It is the case that a certain number of appointments in the Presidency hospitals and medical schools are reserved for members of the Indian Medical Service. That service is recruited by open competition in which Indian subjects are freely admitted. The Secretary of State is not wholly satisfied with existing arrangements and is in communication with the Government of India on the subject.

The Death-rate from Plague.

Dr. RUTHERFORD asked the Under Secretary of State for India what was the death-rate from plague for the first quarter of this year as compared with the rate for last year in the Punjab, Bombay Presidency, United Provinces, and the whole of India respectively.—Mr. BUCHANAN said in reply: The incidence of plague deaths per mille of the population in the first quarter of this year was: Punjab, 0·6; Bombay Presidency, 0·8; United Provinces, 0·3; and whole of India, 0·2. For the corresponding quarter of 1907 the incidence was: Punjab, 7·6; Bombay Presidency, 2·1; United Provinces, 2·4; and India, 1·3. The total number of plague deaths in India was 68,648 in the first quarter of this year, compared with 380,236 deaths in the corresponding quarter of 1907.

WEDNESDAY, MAY 27TH.

The Public Health Act, 1907.

Mr. COURTHOPE asked the President of the Local Government Board when the Orders authorising the adoption of the Public Health Act, 1907, would be issued.—Mr. BURNS replied: I have been in communication with a considerable number of local authorities with regard to cases under the Act. In several instances the statutory requirements have now been complied with and the Orders will, I hope, be issued at an early date. As regards others, communications are still proceeding.

BOOKS, ETC., RECEIVED.

APPLETON, SIDNEY, 25, Bedford-street, London.

Diseases of the Breast, with Special Reference to Cancer. By William L. Rodman, M.D., LL.D., Professor of Surgery in the Medico-Chirurgical College of Philadelphia, Professor of Surgery in the Woman's Medical College of Pennsylvania, Surgeon to the Medico-Chirurgical Hospital, the Woman's College Hospital, the Philadelphia General Hospital, the Jewish Hospital, and to the Presbyterian Hospital. Price 16s. net.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent-garden, London, W.C.

Diphtheria in Practice. By W. F. Litchfield, M.B. Syd., Honorary Assistant Physician, Royal Alexandra Hospital for Children, Sydney. Price 3s. 6d. net.

Lectures on Babies. A Course of Lectures delivered at the Infants Hospital, Westminster. By Ralph Vincent, M.D., B.S., M.R.C.P., Senior Physician to the Hospital. Price 2s. 6d. net.

CHURCHILL, J. AND A., 7, Great Marlborough-street, London, W.

A Manual of the Practice of Medicine. By Frederick Taylor, M.D., F.R.C.P., Consulting Physician to Guy's Hospital. Eighth edition. Price 16s. net.

A Short Practice of Midwifery, embodying the Treatment adopted in the Rotunda Hospital, Dublin. By Henry Jellett, B.A., M.D. (Dublin University), F.R.C.P.I., Gynæcologist and Obstetrical Physician, Dr. Steeven's Hospital; Ex-Assistant Master, Rotunda Hospital. With a Preface by Sir W. J. Smyly, M.D., F.R.C.P.I., late Master of the Rotunda Hospital. Fifth edition, revised. Second 10,000. Price 10s. 6d. net.

A Manual for Midwives. By C. Nepean Longridge, M.D. Viet., F.R.C.S. Eng., M.R.C.P. Lond., Pathologist and Registrar, late Resident Medical Officer at Queen Charlotte's Hospital, Examiner to the Central Midwives Board, and Lecturer on Midwifery for London County Council. Price 3s. 6d. net.

DAVIS (F. A.) COMPANY, Philadelphia.

The Internal Secretions and the Principles of Medicine. By Charles E. de M. Sajous, M.D. Volume II.

GLAISHER, HENRY J., 7, Wigmore-street, Cavendish-square, London, W. (KENNER, W. T., AND CO., 90, Wabash-avenue, Chicago).

Hay-Fever, Hay-Asthma, its Causes, Diagnosis, and Treatment. By William Lloyd, Fellow of the Royal College of Surgeons, Fellow of the Royal Society of Medicine, Surgeon-in-charge of the Nose, Ear, and Throat Department, Kensington General Hospital. Second Edition. Price 4s. 6d. net.

GRIFFIN, CHARLES, AND COMPANY, LIMITED, Exeter-street, Strand, London, W.C.

Forensic Medicine and Toxicology. By J. Dixon Mann, M.D., F.R.C.P., Professor of Forensic Medicine and Toxicology in the University of Manchester, Physician to the Salford Royal Hospital. Fourth edition, revised and enlarged. Price 21s.

LEWIS, H. K., 136, Gower-street, London, W.C.

Rough Notes on Remedies. By Wm. Murray, M.D., F.R.C.P. Lond., Newcastle-on-Tyne. Sixth edition. Price 4s. net.

LIPPINCOTT (J. B.) COMPANY, Philadelphia and London.

International Clinics. Edited by W. T. Longcope, M.D., Philadelphia, U.S.A., with Collaboration. Vol. I. Eighteenth Series, 1908. Price 35s. net. for 4 Quarterly Volumes.

MACMILLAN COMPANY, THE, New York.

Nursing the Insane. By Clara Barrus, M.D., Woman Assistant Physician in the Middletown State Homeopathic Hospital, Middletown, N.Y. Price 8s. 6d. net.

MURRAY, JOHN, 50A, Albemarle-street, London, W.

The Law of Hospitals, Infirmaries, Dispensaries, and Other Kindred Institutions, whether Voluntary or Rate-supported. By Arthur Turnour Murray, of Lincoln's Inn, Barrister-at-Law, B.A. Univ. Coll. Oxon. Price 10s. 6d. net.

REBMAN, LIMITED, 129, Shaftesbury-avenue, London, W.C.

Vitality, Fasting, and Nutrition. A Physiological Study of the Curative Power of Fasting, together with a New Theory of the Relation of Food to Human Vitality. By Hereward Carrington, Member of the Council of the American Institute for Scientific Research, Member of the Society for Psychical Research, London, Author of "The Physical Phenomena of Spiritualism," &c. With an Introduction by A. Rabagliati, M.A., M.D., F.R.C.S., Hon. Gynæcologist and late Senior Hon. Surgeon, Bradford Royal Infirmary, Consulting Surgeon to Bingley Hospital, to Bradford Children's Hospital, and to the Bradford Home for Cancer and Incurables, &c. Price 21s. net.

RIEDEL (J. D.) AKTIENGESELLSCHAFT, Berlin.

Riedel's Berichte. Ausgewählte Arbeiten aus den wissenschaftlichen Laboratorien der Chemischen Fabriken von J. D. Riedel A.-G. Riedel's Mentor für die Namen, sowie für die Zusammensetzung, Eigenschaften und Anwendung neuerer Arzneimittel, Spezialitäten und wichtiger technischer Produkte. 52 Auflage. (Für den Buchhandel erhältlich durch Anton Bertinetti, Berlin N. 54.) Price not stated.

SAUNDERS (W. B.) COMPANY, Philadelphia and London.

Bier's Hyperemic Treatment in Surgery, Medicine, and the Specialties. A Manual of its Practical Application. By Willy Meyer, M.D., Professor of Surgery at the New York Post-Graduate Medical School and Hospital, Attending Surgeon to the German Hospital, Consulting Surgeon to the New York Skin and Cancer Hospital, and to the New York Infirmary; and Professor Dr. Victor Schmieden, Assistant to Professor Bier, University of Berlin, Germany. Price 13s. net.

SMITH, ELDER, AND CO., 15, Waterloo-place, London, S.W.

The Cradle of the Deep. An Account of a Voyage to the West Indies. By Sir Frederick Treves, Bart., G.C.V.O., C.B., LL.D., Sergeant Surgeon to H.M. the King, Lord Rector of the University of Aberdeen. Price 12s. net.

SPRINGER, JULIUS, Monbijouplatz, 3, Berlin.

Lehrbuch der Muskel- und Gelenkmechanik. Von Dr. H. Strasser, o.ö. Professor der Anatomie und Direktor des anatomischen Instituts der Universität Bern. I. Band: Allgemeiner Teil. Price M.7.

STEINHEIL, G., 2, Rue Casimir-Delavigne, Paris.

Étude sur les Contusions, Déchirures et Ruptures du Rein. Par le Dr. Georges Lardennois, Ancien Interne des Hôpitaux de Paris, Prosecteur à la Faculté de Médecine. Price Fr.4.50.

Traitement Chirurgical Actuel des Kystes Hydatiques du Foie et de leurs Complications. Par le Dr. Albert Cauchois, Ancien Interne Lauréat des Hôpitaux de Paris (Médaille d'Argent, 1907), Prosecteur à la Faculté de Médecine. Travail du Service de M. le Professeur Quénu (Hôpital Cochin). Price Fr. 3.50.

SWAN SONNENSCHEIN AND CO., LIMITED, 25, High-street, Bloomsbury, London, W.C.

The Girls' School Year Book (Public Schools). With the Index of Schoolmistresses. An Alphabetical List of Teachers in Public Secondary Schools for Girls. Third Year of Publication April, 1908, to April, 1909. Issued under the Direction of the Editors of the "Public Schools Year Book." Price 2s. 6d. net.

THACKER, SPINK, AND CO., Calcutta.

Manual of Aseptic Surgery and Obstetrics. By E. A. R. Newman, M.D. Cantab., M.R.C.S. Eng., Major I.M.S., late House Surgeon, West London Hospital. Second edition. Price Rs.5.

WOOD, WILLIAM, AND CO., New York.

American Practice of Surgery. A Complete System of the Science and Art of Surgery, by Representative Surgeons of the United States and Canada. Editors: Joseph D. Bryant, M.D., LL.D., and Albert H. Buck, M.D., of New York City. Complete in eight volumes. Vol. IV. Sold only by subscription at $7, $8, or $9 per volume according to binding.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BRISCOE, WILLIAM THOMAS, M.D., M.Ch. Dub., has been appointed Medical Officer for the Pewsham District by the Chippenham (Wilts) Board of Guardians.

DAVIS, H. J., M.B. Cantab., M.R.C.P. Lond., has been appointed Physician-in-Charge of the Throat and Ear Department at the West London Hospital.

ENGLISH, SAMUEL, M.B., Ch.B. Glasg., has been appointed Honorary Surgeon to the Pendleton Branch Dispensary of the Salford Royal Hospital.

FOTHERGILL, W. E., M.D. Edin., has been appointed Lecturer on Clinical Obstetrics and Gynecology in the University of Manchester.

HILL, WILLIAM, has been appointed Surgeon in charge of the new Department for Diseases of the Ear, Nose, and Throat at St. Mary's Hospital.

HOWARTH, WILLIAM JAMES, M.D., D.P.H. Vict., has been appointed County Medical Officer for Kent.

KEARNEY, J. J., M.B., B.S. Irel., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Rosscarbery District of the county of Cork.

KELLY, M. FITZMAURICE, M.B., B.S. Lond., F.R.C.S. Eng., has been appointed Surgical Registrar at St. Mary's Hospital.

ROBERTS, W. R. S., M.B., B.S. Birm., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Ongar District of the county of Essex.

WRIGHT, R. J. B., M.B. B.S. Aberd., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Insch District of the county of Aberdeen.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ALBERT DOCK HOSPITAL, Connaught-road, E.—Senior House Surgeon and Registrar. Salary £100 per annum, with board, residence, and washing. Also House Surgeon. Salary £50 per annum, with board, residence, and washing.

ALTON, HANTS, LORD MAYOR TRELOAR CRIPPLES' HOME AND COLLEGE.—Resident Medical Officer. Salary £150 per annum.

BANGOR, CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House Surgeon. Salary £80 per annum, with board, washing, and lodging.

BATH, ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with lodging, board, and laundry.

BENENDEN, KENT, NATIONAL ASSOCIATION FOR THE ESTABLISHMENT AND MAINTENANCE OF SANATORIA FOR WORKERS SUFFERING FROM TUBERCULOSIS.—Assistant Medical Superintendent at the Sanatorium at Benenden, Kent. Salary £80 per annum.

BERKSHIRE EDUCATION COMMITTEE.—Two Assistant Medical Inspectors of Schools. Salary £300 per annum each and expenses.

BETHLEM HOSPITAL.—Two Resident House Physicians (unmarried), for six months. Salary at rate of £25 each per quarter, with board, residence, and washing.

BIRMINGHAM, PARISH OF.—Assistant Resident Medical Officer. Salary £104 per annum, with apartments, rations, attendance, &c.

BLACKBURN, COUNTY BOROUGH OF.—Assistant to the Medical Officer of Health, unmarried. Salary £50 per annum, with board and lodging.

BRIDGWATER HOSPITAL.—House Surgeon, unmarried, for six months. Salary at rate of £80 per annum, with board, lodging, and washing.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—Third House Surgeon, unmarried. Salary £50 per annum, with board, residence, and washing.

BURNTWOOD, NEAR LICHFIELD, COUNTY ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, increasing to £200, with board, lodging, attendance, and washing.

BURTON-ON-TRENT INFIRMARY.—House Surgeon. Salary £120 per annum, with rooms, board, coals, and light free.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer, unmarried. Salary £100 per annum, with apartments, board, attendance &c.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant.

CITY OF LIVERPOOL EDUCATION COMMITTEE.—School Medical Officer. Salary £300 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. Salary at rate of £50 per annum, with board, washing, and residence.

CITY OF LONDON UNION INFIRMARY.—Assistant Medical Superintendent. Salary £150 per annum, with apartments, rations, and washing.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House Surgeon for six months. Salary at rate of £60 per annum, with rooms, board, washing, and attendance.

DARENTH ASYLUM.—Assistant Medical Officer, unmarried. Salary £150 per annum, with rations, lodging, attendance, and washing.

DURHAM COUNTY COUNCIL EDUCATION COMMITTEE.—Three School Medical Inspectors. Salary in each case £300 per annum, with expenses.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Clinical Assistants.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, London, S.E.—Physician-in-Charge of Skin Department.

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—Assistant House Surgeon, unmarried. Salary £60 per annum, with board, lodging, and washing.

FOLKESTONE, VICTORIA HOSPITAL.—House Surgeon. Salary £100 per annum.

GLOUCESTERSHIRE EDUCATION COMMITTEE.—School Medical Inspector. Salary £250, rising to £300, with travelling expenses.

HAMPSTEAD GENERAL HOSPITAL AND NORTH-WEST LONDON HOSPITAL.—House Physician for six months. Salary at rate of £70 per annum, with board and residence.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £30, with board and residence.

HULL ROYAL INFIRMARY.—Honorary Assistant Surgeon.

INDIAN MEDICAL SERVICE.—Examination for 20 Commissions.

LAMBETH WORKHOUSE, Renfrew-road, Lower Kennington-lane, S.E.—Assistant Medical Officer. Salary £125 per annum, with board, apartments, and washing.

LANCASTER, ROYAL LANCASTER INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with residence, board, attendance, and washing.

LEICESTERSHIRE AND RUTLAND ASYLUM.—Junior Medical Officer. Salary £130, rising to £160 per annum, with board, lodging, and washing.

LEICESTER INFIRMARY.—Assistant House Physician. Salary at rate of £50 per annum, with board, apartments, and washing.

LINCOLN GENERAL DISPENSARY.—Junior Medical Officer, unmarried. Salary £175 per annum, with apartments, fire, and lighting.

LIVERPOOL STANLEY HOSPITAL.—Honorary Ophthalmic Surgeon.

MANCHESTER CHILDREN'S HOSPITAL, Gartside-street.—Assistant Medical Officer (non-resident). Salary £100 per annum.

MANCHESTER, ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Third and Fourth House Surgeons, for six months. Salary £25, with board and residence.

MIDDLESEX HOSPITAL, W.—Dental Surgeon.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.—Lecturer in Anatomy.

MILLER GENERAL HOSPITAL, Greenwich-road, S.E.—Physician to In-Patients, also Surgeon to In-Patients.

NORWICH CITY ASYLUM, Hellesden-next-Norwich.—Assistant Medical Officer, unmarried. Salary £130 per annum, with rooms, board, laundry, and attendance.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—House Physician for six months. Salary at rate of £60 per annum, with board, residence, and laundry.

ROYAL DENTAL HOSPITAL, Leicester-square.—Morning House Anæsthetist. Salary £25 per annum. Also Honorary Radiographer.

ROYAL EAR HOSPITAL, Dean-street, Soho.—House Surgeon. Salary £40 per annum.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Junior Obstetric Assistant for six months. Board, lodging, and laundry provided. Also Clinical Assistants, all females.

ST. LUKE'S HOSPITAL FOR MENTAL DISEASES, Old-street, London.—Clinical Assistant, unmarried, for six months. Board, apartments, and washing provided.

ST. MARY'S HOSPITAL, Paddington, W.—Resident Casualty House Surgeon. Salary £100 per annum, with board, and lodging.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

STAFFORD, STAFFORDSHIRE GENERAL INFIRMARY.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

SOUTH AFRICA, PROVINCIAL HOSPITAL, Port Elizabeth.—Assistant House Surgeon, unmarried. Salary £225, rising to £300 per annum, with board and residence.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon for six months. Salary at rate of £60 per annum, with rooms, board, and washing.

UNIVERSITY OF LONDON, UNIVERSITY COLLEGE.—Sharpey Scholarship in Physiology.

WALSALL AND DISTRICT HOSPITAL.—Junior House Surgeon. Salary £50 per annum, with board, residence, and washing.

WARRINGTON, LANCASHIRE COUNTY ASYLUM, Winwick.—Locum Tenens Medical Officer, unmarried. Salary four guineas per week, with apartments, board, attendance, and washing.

WARWICKSHIRE COUNTY COUNCIL.—Two Medical Inspectors of Elementary School Children. Salary in each case £250 per annum.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, &c., 73, Welbeck-street, W.—Resident Medical Officer for six months, renewable. Salary at rate of 50 guineas per annum, with residence, board, washing, and attendance.

WESTERN GENERAL DISPENSARY, Marylebone-road, N.W.—Honorary Anæsthetist.

WESTON-SUPER-MARE HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board and residence.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House Surgeon. Salary £30 per annum, with apartments, board, and laundry.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with board, lodging, and laundry. Also House Surgeon. Salary £80 per annum, with board, lodging, and laundry.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Horsmonden in the county of Kent; at Youlgreave in the county of Derby; and at Stourbridge in the county of Worcester.

Births, Marriages, and Deaths.

BIRTHS.

BLACKWELL.—On May 20th, at Oxshott Lodge, Oxshott, Surrey, the wife of T. C. Blackwell, M.D., of a son.

BURRIDGE.—On May 22nd, at Mackenzie-street, Slough, Bucks, the wife of John H. Burridge, M.R.C.S. Eng., L.R.C.P. Lond., of a son.

DEATHS.

DOBSON.—On May 24th, at Knott End, Windermere, Thomas Henry Bourne Dobson, M.D., of Myln Garth, Windermere, aged 31 years.

MAY.—On May 21st, at Oxford-gardens, W., Edward Henry May, M.R.C.S., aged 73 years.

Notes, Short Comments, and Answers to Correspondents.

"WE."

To the Editor of THE LANCET.

SIR,—In Dr. George Ogilvie's witty little speech at the recent banquet of the French Hospital which you reported in THE LANCET of May 23rd he remarked that three classes of people are entitled to address the world as "we": (1) Royalty, by right; (2) editors, by custom; and (3) a man speaking on behalf of a body of colleagues. The suggestion has been mooted that yet another class of man has an indubitable right to affect the plural pronoun, to wit, the sufferer from helminthiasis! I am, Sir, yours faithfully,

May 25th. LOGICIAN.

METHOD OF STERILISING RUBBER GLOVES.

IN a recent number of the *National Hospital Record* means are suggested for sterilising rubber gloves. It is important to test the gloves for imperfections by inflating them and holding them under water, when the presence of even minute punctures is revealed by the escape of a stream of small air-bubbles. After thoroughly washing the gloves inside and outside they are shaken in a box in contact with a liberal supply of powdered talc; they are then turned inside out, again shaken with the powder, and transferred to a steam steriliser, each glove being loosely packed with absorbent cotton and wrapped in a towel. The steam should be allowed to flow for three-quarters of an hour, care being taken to keep the gloves as far from the source of heat as possible. In a high-pressure apparatus sterilisation is complete in half an hour. Hot air should not be used. On taking the gloves out of the apparatus they should be wrapped in sterile paper without removing the sterile towels. Before using them the powdered talc should be washed away with alcohol or a suitable antiseptic solution.

A DISCLAIMER.

Dr. G. N. BIGGS writes to us to disclaim the authorship of the notice which recently appeared in the *Daily Telegraph* announcing his appointment to a London hospital.

DOSE TABLES.

WE have received a little booklet of 24 pages, entitled "The C. & D. Dose Tables for Students of Pharmacy." It contains a table showing the adult doses in ordinary cases of the principal medicinal agents and a table of metric equivalents as well as a table of atomic weights. It will go into an ordinary vest pocket. The price is 3d., post free, from the *Chemist and Druggist* (Book Department), 42, Cannon-street, London, E.C.

SUMMER HOLIDAYS.

IN connexion with the articles now appearing in our columns upon Scandinavian health resorts, our readers may like to know that the Orient Steam Navigation Company is catering for holiday-makers in the shape of pleasure cruises to Norway by the s.s. *Ophir*, the vessel which conveyed the Prince and Princess of Wales on their voyage round the world. The inaugural cruise of the season will start from London on June 12th and Grimsby on the following day, and passengers will be enabled to see some of the grandest scenery in Norway. A pamphlet descriptive of the cruise can be obtained free on application to the Orient Company, and the cost of the voyage is moderate.

W. H. K.—Some 40 years ago there was a movement which spread widely for the alteration in pronunciation. In many schools the so-called new method of pronunciation died out again but in some it remained in force. Nowhere, however, was the pronunciation of popular or colloquial Latin phrases altered in consequence, and our correspondent's apprehensions are, we think, unfounded.

Inquirer.—Medical men ought not to make a profit in the way suggested. It is generally recognised, however, that they have the right to allow the instrument maker to have a monopoly of the sale of any instrument, which can only be obtained by the taking out of a patent, or otherwise no guarantee would exist of the proper manufacture of the instrument.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Stratford-upon-Avon Herald, Cardiff News, Glasgow Evening Times, Portsmouth Evening News, Belfast News Letter, Freeman's Journal, Scotsman, Preston Post, Daily Chronicle, Standard, Leeds Post, Birmingham Gazette, Morning Post, Manchester Courier, Wimbledon Gazette, Brighton and Sussex Daily News, Daily Express, Dundee Advertiser, &c.*

Medical Diary for the ensuing Week.

SOCIETIES.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank, S.W.

TUESDAY.—8.30 P.M., Col. F. J. Lambkin, R.A.M.C.: Syphilis in the Uganda Protectorate.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's General Hospital, Tottenham, N.

THURSDAY.—4.15 p.m., Clinical Cases.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Mr. G. Pernet: Clinique (Skin). 5.15 P.M., Lecture:—Dr. D. Grant: Practical Hints on the Examination of the Nose.

TUESDAY.—4 P.M., Dr. T. Williams: Clinique (Medical). 5.15 P.M., Lecture:—Mr. J. Cunning: Some Surgical Affections of the Colon.

WEDNESDAY.—4 P.M., Mr. T. P. Legg: Clinique (Surgical). 5.15 P.M., Lecture: Dr. F. J. McCann: How to Diagnose Cancer of the Womb (with lantern slides).

THURSDAY.—4 P.M., Mr. Hutchinson: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. J. W. T. Walker: The Treatment of Stricture of the Urethra.

FRIDAY.—4 P.M., Dr. H. Tilley: Clinique (Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—12 noon, Lecture:—Dr. Low: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eyes. 2.30 P.M., Operations. 5 P.M., Lecture:—Mr. Dunn: Cases of Eye Diseases.

TUESDAY.—10 A.M., Dr. Moullin: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Davis: Throat, Nose, and Ear Diseases. 2.30 P.M., Operations. Dr. Abraham: Skin Diseases. 5 P.M., Lecture:—Dr. Low: Plague.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations on Throat, Nose, and Ear. 12.15 P.M.: Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Scott: Diseases of the Eyes. 2.30 P.M., Operations. 5 P.M., Lecture:—Dr. R. H. Cole: Epilepsy and Insanity.

THURSDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eyes. 2.30 P.M., Operations. 5 P.M., Lecture:—Mr. Edwards: Clinical Lecture I.

FRIDAY.—10 A.M., Dr. Moullin: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Davis: Throat, Nose, and Ear Diseases. 2.30 P.M., Operations. Dr. Abraham: Skin Diseases. 5 P.M., Lecture:—Mr. Bidwell: Results after Gastroenterostomy.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations on Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Scott: Diseases of the Eyes. 2.30 P.M., Operations.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. J. H. Evans). 2.30 P.M., Medical Out-patient (Dr. Whipham); Nose, Throat, and Ear (Mr. Carson); X Rays. 4.30 P.M., Medical In-patient Clinic (Dr. Whiting).

TUESDAY.—Clinic:—10 A.M., Medical Out-patient (Dr. Auld). 2.30 P.M., Surgical Operations (Mr. Carson). Clinics:—Surgical (Mr. Edmunds); Gynæcological (Dr. Giles). 4.30 P.M., Special Demonstration of Selected Surgical Cases (Mr. Carson).

WEDNESDAY.—Clinics:—2.30 P.M., Medical Out-patient (Dr. Whipham); Skin (Dr. Meachen); Eye (Mr. Brooks).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. Giles). Clinics:—Medical Out-patient (Dr. Whiting); Surgical (Mr. Carson); X Rays. 3 P.M., Medical In-patient (Dr. Chappel). 4.30 P.M., Throat Operations (Mr. Carson).

FRIDAY.—10 A.M., Clinic:—Surgical Out-patient (Mr. J. H. Evans). 2.30 P.M., Surgical Operations (Mr. Edmunds). Clinics:—Medical Out-patient (Dr. Auld); Eye (Mr. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie).

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2.15 P.M., Sir Dyce Duckworth: Medicine. 2.30 P.M., Operations. 3.15 P.M., Mr. W. Turner: Surgery. 4 P.M., Mr. L. A. Lawrence: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 3.15 P.M., Special Lecture:—Mr. W. Turner: Whitlows.

TUESDAY.—2.15 P.M., Dr. R. T. Hewlett: Medicine. 2.30 P.M., Operations. 3.15 P.M., Mr. Carless: Surgery. 4 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 2.15 P.M., Special Lecture:—Dr. Hewlett: Notes on Disinfection and the Use of Disinfecting Agents.

WEDNESDAY.—2.15 P.M., Dr. F. Taylor: Medicine. 2.30 P.M., Operations. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

THURSDAY.—2.15 P.M., Dr. G. Rankin: Medicine. 2.30 P.M., Operations. 3.15 P.M., Sir W. Bennett: Surgery. 4 P.M., Mr. M. Davidson: Radiography. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

FRIDAY.—2.15 P.M., Dr. R. Bradford: Medicine. 2.30 P.M., Operations. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.
SATURDAY.—2.30 P.M., Operations. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

ROYAL INSTITUTION OF GREAT BRITAIN, Albemarle-street, Piccadilly, W.
TUESDAY.—3 P.M., Prof. W. Stirling: Animal Heat and Allied Phenomena.
FRIDAY.—9 P.M., Professor Sir James Dewar: The Nadir of Temperature and Allied Problems.

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TUESDAY.—3 30 P.M., Lecture:—Dr. Ormerod: Hysteria.
FRIDAY.—3.30 P.M., Lecture:—Mr. M. Gunn: Optic Atrophy.

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MONDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.). Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), West London (2.30 P.M.).

TUESDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.).

WEDNESDAY (3rd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.).

THURSDAY (4th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.).

FRIDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.).

SATURDAY (6th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 28th, 1908.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb	Remarks.
May 22	29·76	S.W.		118	61	46	48	54	Cloudy
,, 23	30·03	N.W.	0·01	113	61	45	49	54	Fine
,, 24	30·02	S.	...	115	65	47	55	60	Fine
,, 25	29·83	S.W.	...	99	61	55	51	55	Cloudy
,, 26	30·11	W.	...	99	65	53	54	57	Cloudy
,, 27	30·46	W.	...	117	74	55	56	63	Fine
,, 28	30·47	E.	...	126	71	53	57	63	Fine

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